



OFFICE OF RAIL REGULATION

Opportunities & challenges for the railway

ORR's long-term regulatory statement

July 2013

Office of Rail Regulation

Contents

Foreword: the long-term regulatory statement	4
Executive summary	6
Introduction: opportunities and challenges for the railway	8
Independent regulation of rail	8
Rail's defining characteristics	9
Evolving models for delivering rail services	11
Funding rail	11
Competition and rail	12
The opportunity for the rail industry	12
The railway in 2033	13
Addressing the long term challenges	14
1. Recent growth, performance & safety on the network	16
Why rail matters	17
Rail's contribution to economic growth	18
Growth in customer satisfaction	19
Contribution to Britain's environmental performance	21
An ever-safer railway	21
Joined-up health & safety regulation	24
2. Financial sustainability and funding	26
Benefits and consequences of the funding framework	28
Structure and incentives in Network Rail	30
Debt burden and financing costs	30
Alternative sources of investment	34
3. Efficient infrastructure and capacity	37
Evolving models of infrastructure delivery	38
Operational devolution of infrastructure	39
Incentive effects of the Network Grant	40
Valuing network capacity	41
Strengthening the charging structure	43
Effective System Operation	45
4. Supporting an industry working more closely together	49
Consumers at the heart of the railway	50
Greater transparency & accountability	53

Empowering train and freight operators	54
Open access and on-rail competition	55
Strengthening the franchising model	56
Supporting a growing freight industry	57
Opening up European rail markets	58
5. Developments in rail regulation	62
The complex regulatory environment	63
A principled approach to regulation	65

Foreword: the long-term regulatory statement

This Long Term Regulatory Statement is being presented in light of ORR's Draft Determination for the 2013 Periodic Review (PR13), which was published on 12 June. In PR13 ORR is making a package of decisions that sets the framework for financing and delivering improvements in the infrastructure and operation of Britain's railway during Control Period 5 (CP5) from 2014-2019 that meets the challenge of sustaining growth on the network while driving further efficiency. As such, PR13 lays the foundations for the development of the sector for many years to come. It will support new partnerships across the industry, new alliances between rail businesses, and enable enhancements to infrastructure and services that benefit passengers and create new opportunities for our economy and society.

However, the five-year regulatory period up to 2019 is a relatively short period of time in an industry where assets can last for many decades, and where investment decisions must be taken with a long-term view. In this environment it is necessary for decision-makers at all levels, in businesses and in government, to consider the long-term direction of travel for the industry.

This Long-Term Regulatory Statement looks beyond CP5, at some of the opportunities and challenges facing the railway over the next two decades. It provides context to the actions that we are taking in PR13, especially where we anticipate that they will have effects well beyond CP5. In doing so we aim to stimulate a debate about the way in which the industry, and by consequence its regulation, may develop in the future.

This is a discussion document. Its purpose is to stimulate debate about the future development of the railway and its regulation. It is not a prescription for, or a single vision of, the future of the railway. Big decisions about investment and services will continue to be taken by the industry, government and the regulator working together, as they are now, in the context of the wider debate in society about the sort of railway that we want.

While this document is meant to elucidate, it is not a commitment to future regulatory decisions. The issues discussed here go beyond regulation, reflecting the fact that as an independent regulator the ORR has a unique perspective upon the long-term trends, opportunities and challenges that Britain's railways face. As an accountable public body, ORR has a responsibility to discuss with our stakeholders in industry and government how we see the railway developing in

the future, and what we consider this could mean for the future of regulation, accepting all of the uncertainty that any discussion about the future holds.

What is certain is that Britain's railway will, in just a few years' time, look quite different to the railway that we have today. The governments in London, Edinburgh and Cardiff, as well as other funders, have shown great confidence in rail and continue to invest tens of billions of pounds in the mainline network as well as in new projects like Crossrail and HS2. This investment will change the shape of the railway considerably, and this document explores some of the implications of this transformation.

We hope that this document promotes debate among our stakeholders as we work together to build a successful, safe and sustainable future for Britain's railway.

Anna Walker, Chair

Richard Price, Chief Executive



Executive summary

- The five-year regulatory period up to 2019 is a relatively short period of time in an industry where assets can last for many decades. This Long-Term Regulatory Statement looks beyond CP5 (which is 2014-19), at some of the opportunities and challenges facing the railway over the next twenty years.
- Britain has the most intensively used rail network in Europe. Passenger numbers are at a record high, and passenger and freight traffic continues to grow steadily. The industry's recent safety record is good, and although we cannot be complacent, the British railways have been among the safest in Europe in recent years.
- The organisation of the railway is experiencing a period of rapid change. A variety of related forces are at work that will reshape the industry over the next generation. By 2033 the railway will be a much larger, busier and more diverse sector than it is today. The rapid pace of change across the sector means that an opportunity exists to develop a more commercially self-sustaining industry, with less need for government and regulatory involvement overall.
- Independent rail regulation has supported high and stable levels of investment and significant efficiency gains over the last decade. However the returns to the current approach are likely to diminish beyond CP5, and the next phase of benefits requires a significantly greater alignment of incentives across the industry by creating more normal commercial relationships and greater joined-up working. There is scope for much greater competition across rail markets to drive positive consumer outcomes, if barriers to competition can be lowered.
- Continued high levels of public financial support for the sector makes it important that it is increasingly financially transparent and accountable, and that it ensures that on-going levels of investment are sustainable over the long term. As Network Rail's debt continues to grow, we need to look at how to finance this sustainably and efficiently, and its relationship to the value of their regulated assets.
- Transparency of information about service outputs, costs, and where public funding actually goes will continue to improve throughout CP5 and CP6 as ORR and government develop detailed high-quality data that supports stronger accountability to funders and better decision-making across the industry. This will help governments in London and Edinburgh to be intelligent procurers of investment and services that they value most.
- The financial structure of the industry has an important effect on incentives for efficiency and performance. In preparation for CP6 the ORR will work with Network Rail and the UK

and Scottish governments to look at the structure of funding across the industry and the incentives that it currently creates for efficiency and performance. ORR will also review the structure of regulatory charges across the industry and the incentives that these create for efficient use of track capacity.

- ORR welcome the industry's move away from a one-size-fits all approach towards different models of network delivery that suit the features of the regions and customers that each serves. New models of infrastructure delivery and operation are being developed in different parts of Great Britain. Network Rail is devolving operational control to its routes, shrinking management chains and bringing services closer to their customers. Scotland and Wales continue to work closely with Network Rail to develop their own approaches to rail infrastructure that meets the needs of customers and funders in their countries.
- ORR will strengthen the incentives that it creates in CP6, developing a more comparative approach to network regulation that supports effective and dynamic management of network infrastructure at the route level.
- ORR will continue to make the case to government that the structure of public funding should adapt to strengthen the incentives that it creates for Network Rail's routes to work closely with their train operating customers for efficiency and performance, with a greater element of the Network Grant supporting services directly.
- Greater cross-industry cooperation is needed to deliver the next round of efficiency and performance benefits, but normal commercial incentives are currently poorly aligned. The Rail Delivery Group (RDG) is enhancing whole-industry strategic dialogue.
- Passenger and freight operators should be strong and demanding customers of Network Rail. ORR is taking actions to give them greater influence. ORR is arguing for greater commercial flexibility in franchises and the exposure of operators to the costs and benefits of Network Rail's performance through changes in track access charges.
- Europe is having a growing influence on the structure and regulation of rail markets. In light of the European Commission's publication of the Fourth Rail Package ORR will continue to work with DfT and industry to open up EU markets, and ensure that EU regulation develops in a way that is beneficial to UK interests.

Introduction: opportunities and challenges for the railway

Britain's railways have made enormous progress over the last decade. They have undergone a remarkable recovery following the period of uncertainty in the early years of privatisation, with high levels of sustained growth in demand, a good recent safety record, and punctuality and customer satisfaction at near record levels. Following a post-war period of 'managed decline', since the mid-1990s passenger numbers have doubled and freight traffic has risen by 60%. Passenger revenues are also rising, improving the financial position of the industry.

The growth of demand for rail, driven partly by huge investment in infrastructure and services by government, and also by the industry's own efforts to raise its standards, is both a great advertisement and opportunity for the sector. But demand growth has also put pressure on a network which, in places, is near its capacity. Further growth of around 14% in passenger demand and 22% in freight is forecast for just the next five years, not least as passengers and freight switch away from road congestion and business customers attempt to reduce their carbon emissions.

Success has not been without a corresponding price. The costs of maintaining and upgrading infrastructure grew substantially following the failure of Railtrack, and it has taken a decade to bring these costs under control. Efficiency and performance still have room for improvement on behalf of passengers, and taxpayers are still subsidising the network by about £4 billion a year. Growth creates its own challenges as passengers experience increasingly crowded stations and trains.

Rail now faces a huge opportunity to consolidate its position and continue to grow; but to do so it will need to move to the next level of maturity as an industry, developing its commercialism, capabilities, culture and confidence. This document describes the forces that are driving change across the sector, and how the shape of Britain's railways may evolve in the future.

Independent regulation of rail

Independent regulation has a well-established track record in the UK, which led the world in developing regulatory frameworks for essential public services and infrastructure. The UK's approach to independent regulation is part of the positive business case that many investors, including some of the world's largest pension and sovereign funds, cite as a reason for investing in the UK. At the centre of this assurance is that regulators act independently from government within a stable and predictable framework of clearly defined powers and duties.

Independent regulation of the railway has been a recent successful example of this approach. Through ORR's last two Periodic Reviews, over the last decade, Network Rail has reduced the day-to-day cost of the railway by around 40 per cent. On top of that ORR's Draft Determination for PR13 shows that Network Rail has the opportunity to improve the efficiency of the railway by a further 20 per cent, and our approach to assessing the efficiency of enhancement projects will develop this further over the period. If Network Rail can meet this challenge then ORR believes that the efficiency gap for the maintenance and operation of network infrastructure identified by the McNulty review will have been addressed by 2019-20, with network infrastructure potentially among the more efficient in Europe, although costs in the industry as a whole still have a way to go. Network performance and reliability could also be greatly improved in many areas.

Despite this, regulation can only do so much and the returns will diminish beyond CP5 without a more fundamental evolution in the structure of the industry. The next phase of benefits requires a significantly greater alignment of incentives between all parts of the industry value-chain, to create more normal commercial relationships and greater joined-up working across the sector. If the industry can operate increasingly on the basis of transparent and commercial arrangements, with effective aligned incentives that deliver benefits for customers, then regulation will change to reflect the different structure of the sector.

Rail's defining characteristics

In order to make the most of the opportunity to grow and develop in the future we first need to be clear about the strengths and weaknesses in the way that the industry is structured and governed today. By any standards, rail is not a typical commercial industry. Even by comparison with other regulated monopoly markets such as energy and water it has a number of distinct characteristics that shape the sector:

- there are large monopoly elements in the sector, especially the ownership of the bulk of Britain's national rail infrastructure by Network Rail which, while it is much more efficient than it recently was, remains much larger and more complex than comparable infrastructure businesses;
- retail competition is limited by the structure of franchised passenger services, through which the governments in London and Edinburgh choose to procure a socially-desirable level of train services which the market would not necessarily provide. Franchisees are regulated through contracts by the Department for Transport and Transport Scotland acting as wholesale procurers of rail services;

-
- the mixed use of private and public funding is more complex than most sectors. Industry revenues are still much lower than costs and direct public funding makes up around one-third of the industry's income, imposing a large on-going cost to taxpayers. This directly funds the level and quality of service, finances investment in infrastructure, and subsidises some fares as governments purchase wider social, environmental and economic benefits that the market may not otherwise fund;
 - there is significant cross-subsidy from infrastructure to services, meaning that value and risk does not always follow the flow of funds, causing significant misalignment of usual customer-client relationships throughout the sector;
 - the passenger railway has been increasingly subject to detailed specification and regulation. Government and the regulator are relatively heavily involved in very detailed decision making about services and infrastructure compared to other regulated sectors. This means that the industry's freedom to make decisions independently and commercially is much more constrained than in any comparable sector of the economy; and
 - this complexity is also reflected, to an extent, in the regulatory environment, which differs greatly through the rail value chain. While ORR has whole-sector responsibility for competition health and safety, there is a diversity of approaches to specific economic regulation and contractual management for different parties.

All of this means that over the last decade, the rail industry has been missing, for the most part, the commercial relationships and drivers which are present in most other regulated utilities, let alone in other consumer transport sectors; it has been prone to detailed decision-making and intervention by government, and it has been susceptible to prescriptive regulation, from both the ORR and the Department for Transport. As a consequence of these factors, much of the industry has been subject to bureaucratic rather than commercial management and decision-making.

In many ways the industry has been a remarkable success through the last decade, as the next section of this document describes, but there is growing recognition from the industry and policy-makers that the next leap forward in quality, capacity, customer service and value for money, can only happen if the factors above are addressed. Through PR13 the ORR is encouraging collaboration across the industry and strengthening incentives for efficiency and performance. But it will take longer than a five-year regulatory period to address the issues, and requires the whole industry to come together and address these challenges over a longer time period. This discussion document will inform that debate.

Evolving models for delivering rail services

The organisation of the railway is experiencing a period of rapid change. A variety of related forces are at work that will reshape the industry over the next generation. In infrastructure delivery, Network Rail is moving away from a centralised command-and-control approach as it devolves responsibility to ten operational route areas across Britain. At the same time, HS1 has demonstrated that it is possible to attract pension funds to invest in certain parts of the railway, and HS2 will add significant new capacity to some of the country's busiest routes. In the South West rail route, the Alliance between Network Rail and South West Trains has developed a model of integration between infrastructure and service providers that may have relevance elsewhere.

Political devolution of decision-making to the countries and regions of the UK is also altering the way that railway services are specified and procured in different areas. Integrated metropolitan transport authorities in London, Merseyside and elsewhere take their own approaches, and Scotland is working to develop its own model of integrated transport including rail. As the next generation of franchises for the operation of rail services is specified, there will be an opportunity to take advantage of this transformation and align incentives for efficiency and customer service across the industry.

Funding rail

The governments in London, Edinburgh and Cardiff are always likely to want to make large strategic investments that the industry could not finance itself. The marginal cost of new investment can often exceed the marginal benefit measured in purely financial terms, as governments attempt to meet wider social, environmental and development objectives noted above. To this extent, the railway is unlikely to reach a position of being entirely self-funding in the foreseeable future. Different funding models using public and private capital in various combinations are used across the UK in different circumstances. Whatever combination or model of public and private funding is used it should be sustainable and efficient.

As this discussion paper goes on to describe, this does not mean that ORR's policy is to remain neutral about the sort of structures that it wants to see develop in the industry. The critical issue is the alignment of incentives that the industry faces when making decisions, so that it that promotes customer interests and naturally maximises its own efficiency and financial sustainability over time, allowing the governments to maximise the impact of public support. Existing regulatory mechanisms may not deliver the next phase of benefits beyond CP5 as quickly or effectively as liked, without changes that expose the industry to aligned incentives that benefit the whole railway and its customers when the industry works together.

Competition and rail

Successive governments have sought to encourage competition in rail markets since privatisation, as the experience in other monopoly sectors is that greater competition can deliver real benefits for consumers in cost and quality of services. As the competition authority for the sector ORR has a duty to promote competitive markets in rail wherever possible and taking account of its other statutory duties. There are many highly competitive markets in rail, including the competition between operators to win the right to run franchises, competition between rolling-stock providers, the highly-competitive freight sector, and a small number of open access operators providing on-rail competition for passenger services, discussed later in Section 4. The supply chain that serves Network Rail is increasingly competed, and ORR intends for it to become more so over time.

Government policy in London and Edinburgh concerning the structure of rail markets, in particular around the scope of franchises and the procurement of rolling stock, has an important impact on the potential for competition in parts of the sector, particularly on-rail competition for passengers. This reflects the natural tension between the benefits that competition may provide passengers, with the need for government to get value for taxpayers by maximising returns from franchises.

There is an opportunity for there to be much greater on-rail competition in the future, if governments desire it. The addition of new capacity, including HS2, and the introduction of new signalling technology that allows much more dense use of network capacity, will open up new route paths that could allow greater on-rail competition between operators.

The opportunity for the rail industry

The support of government and other funders is an important part of shaping what the railway delivers, and always will be. Government's role is central, in assessing what the country wants from its railway, and the services and capacity which are in the interests of promoting growth, connectivity and environmental benefits, which may not be profitable for the market to deliver.

However, the dependence of rail on large block subsidy from government through the Network Grant is a significant influence across the sector. It undermines commercial decision making throughout the system, with many decisions on the detail of delivery taken in government, rather than driven by the demands of rail customers – both passengers and freight. This contrasts with the potential for rail businesses to shape solutions that reflect their expert understanding of operations, planning, technology, innovation, customer satisfaction and growth.

There is the potential to transform this so that rail becomes a more dynamic, mature, efficient and customer-focused industry. If the industry can deliver on the efficiency challenge that now faces it,

it will be possible to reduce its dependence on public subsidy, and to get much greater transparency on where public money goes and what it buys.

Governments and public authorities are demonstrating their on-going willingness to continue to support rail, but the industry needs to give them better information for making choices over how their money is used and more clarity on what they get for it; specifying what is to be delivered, and looking to the industry to develop its creativity and innovation to shape how best to deliver.

As it becomes less dependent on subsidy, beyond the specific services and capacity funders choose to buy, the industry ought to become freer to take its own decisions on how best to meet its customers' expectations and grow demand.

Although customer satisfaction has improved considerably, overall performance and reliability across the network is still not as good as it could and should be. Rail businesses need to focus on how they can meet rising expectations through better customer service, better information, and innovation-providing more of what people want to buy at better value; just as private businesses do in other industries. This potential is all the greater now, given the scope for major changes in the way the railway operates through electrification and transformed signalling and information systems.

As efficiency improves, there is an opportunity for rail businesses to work together in a commercial way to deliver for their customers, potentially with less intervention from ORR and government. The way the industry operates could be transformed, but this requires the industry, its customers, government and the regulator to work together to make it happen.

The railway in 2033

Existing developments are already laying the foundations for fundamental changes to the way that rail infrastructure is procured, maintained, renewed and operated across the UK. It is possible to extrapolate the trends already underway to get an idea of what the railway will look like in 20 years' time, and how it will differ from today. Several of these themes are developed in later sections of this document:

- **A larger railway:** Capacity will continue to grow significantly because of new investments like Crossrail, Thameslink, the Northern Hub, Edinburgh-Glasgow upgrades, new high-speed services into Europe and the significant commitment to High-Speed 2.
- **A much busier, more intensively used railway:** Many existing lines are running at or near their current capacity. Future growth on these lines will only be achieved through continued

investment to grow capacity and use infrastructure more intensively. Longer, faster trains are already planned in some areas; electrification and new on-board signalling technology will allow faster and denser use of the existing network. Growth in rail freight will make the network even more mixed-use than today.

- **More joined-up industry:** There will be continued innovation in different operational models for maintaining and operating rail infrastructure, building on recent experience including the Wessex Alliance between Network Rail and South West Trains, collaboration between Network Rail and Scotrail and the concession to operate HS1.
- **A more transparent industry:** The current trend for much more open and clearly presented information to passengers and the public about the real costs and performance of the rail network will continue so that customers, funders and decision-makers at all levels can make informed choices about the services that they want to use and to pay for.
- **Railway closer to its customers:** Devolution of responsibility for maintaining and upgrading infrastructure away from the centre and down to the route level puts the network closer to its customers, the TOCs, FOCs and the devolved administrations and local authorities, joining up incentives and improving efficiency and decision-making.
- **A more international railway:** As well as there being new services into more destinations in continental Europe, as we make better use of capacity in the Channel Tunnel, the regulatory influence of the European Rail Agency and European Commission is likely to grow as they work to opening up cross-border European rail markets for infrastructure and for services.
- **A safer railway:** ORR will continue to work to ensure that the industry delivers continuous improvement in health and safety on the railway for passengers, the wider public and for its workers.

By 2033 we therefore envisage that rail will be a much larger, more varied and more diverse sector than it is today. These trends are cause for optimism, but they also create certain challenges.

Addressing the long term challenges

This document goes on to discuss in more detail how ORR can support developments in the industry in the context of the long-term challenges and opportunities that it faces, and to provoke a discussion across the industry about how we can work together better to address them.

The first four sections of this Long-Term Regulatory Statement set out ORR's consideration that the long-term success of the rail industry relies on four inter-related pillars:

-
- supporting the railway's contribution to UK growth and prosperity;
 - strengthening long term financial sustainability;
 - innovating new approaches for the efficient delivery of railway infrastructure and operations;
and
 - promoting a more commercially aligned rail industry which works together to deliver for customers.

The fifth and final section goes on to discuss how developments in support of these four pillars could affect the regulatory environment, and how ORR's approach to regulation might develop in line with the changing shape of the industry.

1. Recent growth, performance & safety on the network

Summary

- Rail supports growth in two ways: the significant levels of infrastructure investment creates an initial stimulus to economic output but, more significantly, the provision of efficient and high-quality rail transport for both people and freight supports growth across the rest of the economy.
- Passenger numbers and freight traffic have both grown substantially since the mid-1990s, against the expectations at the time. More people across the country are using the railway now than ever before, as the market-base for rail expands.
- The UK now has the most intensively used network in Europe. Growth is forecast to continue, with a 14% increase in passenger demand and 22% growth in freight tonnage over the next five years.
- Passenger satisfaction is today at near-record levels. A recent EU report said that the UK had the most improved railway for passenger satisfaction over the last decade.
- The recent health and safety record of the railways has been good and is now among the best in Europe.
- As the health and safety authority for the railway, ORR's strategy is to enforce the law and ensure that the industry delivers continuous improvement in the health and safety of passengers, the workforce and public, by achieving excellence in health and safety culture, management and risk control.

1.1 Britain's railways have enjoyed a period of remarkable growth and achievement over the last ten years, following decades of 'managed decline'. Since privatisation passenger numbers have doubled and freight traffic has risen by 60%. Last year, even in difficult economic conditions, the number of passenger journeys rose by 3%, and the volume of freight moved by rail also saw growth of 3%.

1.2 Passenger revenues have risen recently by over 7% per year, supporting the financial position of the industry. Despite a more congested network, passenger satisfaction and train punctuality are at or near an all-time high. And, while we can never be complacent, the industry has a good recent safety record.

1.3 The growth of demand for rail is both a great advertisement and opportunity for the industry. But demand growth has also put pressure on a network which, in places, is near its capacity. Further growth of around 14% in passenger demand and 22% in freight is forecast for the next five years.

1.4 The governments in London and Edinburgh, as well as other funders, have shown great confidence in rail. The very significant on-going investment into the sector will change its shape and structure considerably over the next twenty years. This does not just include investment in the existing mainline railway, but also new investments like Crossrail, Thameslink, the electrification program across the country, significant development of rail services across the North of England, new high-speed services into Europe and the significant commitment to HS2. These long-term investments will transform Britain's railways for generations to come.

Why rail matters

1.5 The railway plays an important role in facilitating sustainable economic growth by connecting people and communities and providing a means of transport for people and goods. It has advantages over road on the haulage of heavy bulk freight like coal and aggregates. It compares well with road and air on fast, long-distance passenger journeys; and it is competitive with road on the distribution of goods in the intermodal sector. The railways link our major towns and cities, and many of our large urban centres would simply not function effectively without the trains that serve them, as is demonstrated occasionally when things go wrong.

1.6 The railways also serve a valuable social function that goes beyond the strict economic value that they deliver. The benefits of linking communities and smaller centres of population, especially where other modes of transport are unavailable or impractical, are why public money continues to support the provision of services in many areas. Rail heavily affects the distribution of local labour markets, opening up opportunities for work. Rail travel also has environmental benefits, reducing congestion and pollution caused by road traffic.

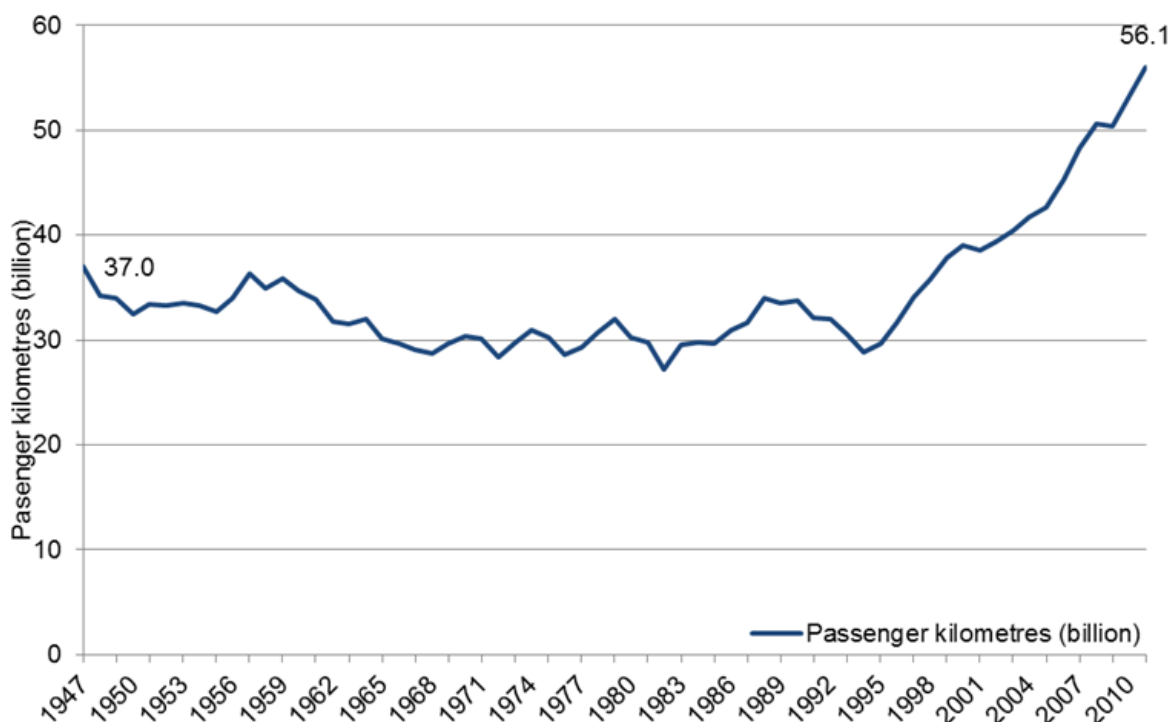
1.7 Rail is central to several key components of our transport demands as an economy. So, in common with other regulated sectors, such as energy or water or telecoms, the output of the rail industry matters. It matters because both economic and social activity would be constrained without it. There are substantial social benefits from the railway and given the level of on-going

public subsidy the efficient and effective operation of the railway industry is of significant public interest.

Rail's contribution to economic growth

1.8 Rail's contribution to growth comes in two forms. The initial direct effect of investment in rail makes an immediate contribution to economic output. However the real reason for making this investment, and for operating the railway at all, is for the long-term contribution that this investment makes to enhancing economic and social connectivity and the potential for growth across the rest of the economy for many years to come. In planning new rail investment it is therefore important to look at where the growth in demand for rail is coming from.

Figure 1: Passenger kilometres travelled 1947 - 2011



Source: Office of Rail Regulation (ORR)

1.9 A recent study into current trends in travel by rail and road conducted by the Independent Transport Commission (*'On the Move: Making sense of car and train travel trends in Britain'*, December 2012), and part-sponsored by ORR, found that 60% of the growth in British rail travel since 1995 is the result of more people starting to travel by train, rather than existing rail users travelling more. There has been a 50% increase in total passenger kilometres travelled, and this is almost entirely explained by an expanding market base. Although a small proportion of this growth

was accounted for by some groups of users transferring away from car travel, most were entirely new journeys.

1.10 The reach of rail travel is therefore growing across the population. While still only a small proportion of all journeys taken are by rail (10% of average annual mileage per person in 2010) Rail services are being used by a wider range of people than ever before, illustrating rail's growing penetration across society.

1.11 This strongly suggests that the growth in rail travel is supporting new and additional activity in the economy, adding directly to the bottom line of UK GDP growth. Rail travel supports other economic activity, whether this is for work or leisure, but it is notable that rail mileage has grown particularly rapidly for business travel; nearly tripling over the ten-year period. There is also some evidence of a partial shift of business travel from company car to rail among the male demographic.

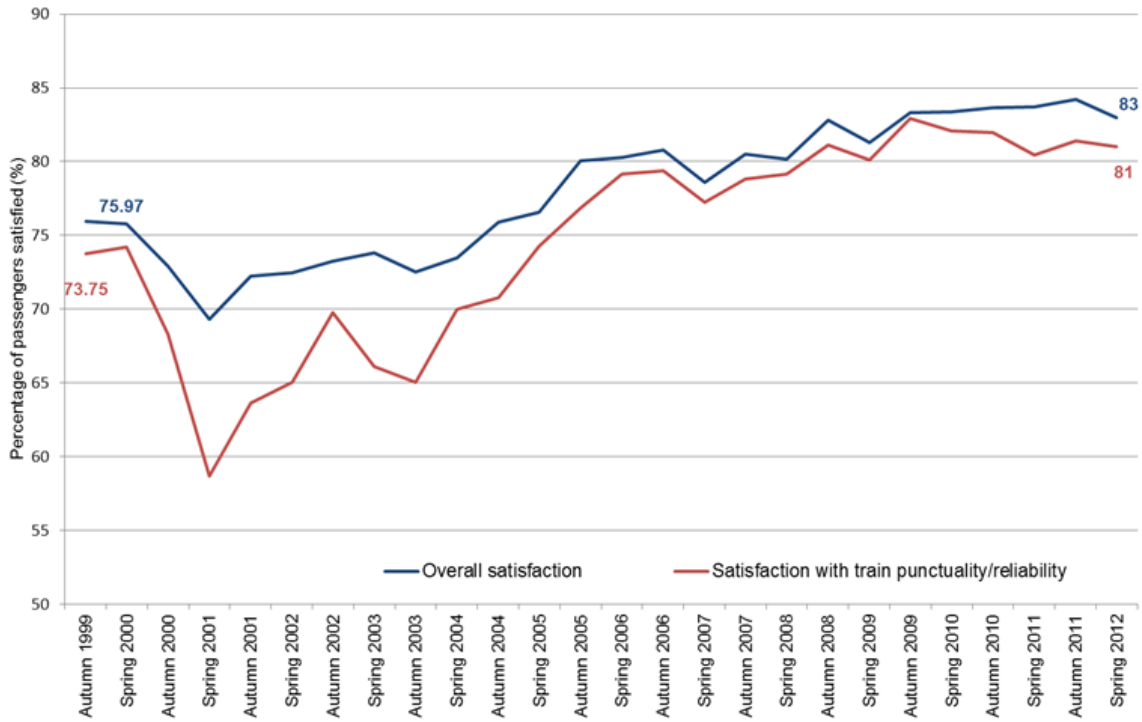
1.12 The greatest absolute growth in rail travel, however, is for non-commuting business purposes (170% growth from 1995-2007). The strongest 'traditional' rail markets for commuting trips and travel to/from London) are not growing as fast as other rail markets. While the market is still growing overall, the proportion of all National Rail journeys that are to/from or within London is down from 63% in 1995/7 to 57% in 2005/7, according to the ITC study. So, as well as being used by more people, rail travel is being used more widely across the country than before.

1.13 The study also underlined the impact of rail on the environment and on relieving congestion, by finding that car drivers who also used rail during the week drove around 1,000 miles per year less than those drivers who did not travel by train.

Growth in customer satisfaction

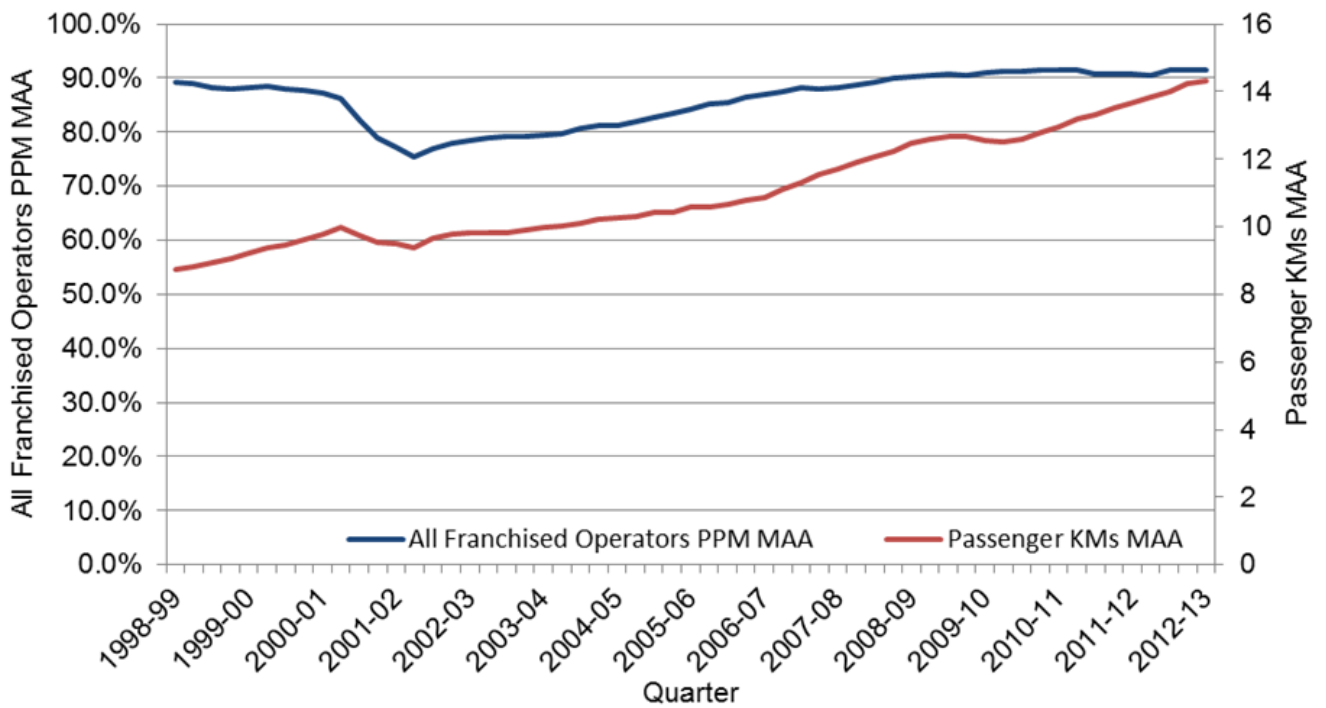
1.14 On a network that is now the most intensively used in Europe, with capacity increasingly constrained in some areas, passenger satisfaction is at record levels (Figure 2). A study by the European Commission recently showed that the UK has the most improved railway in the European Union over the last decade for the service provided to passengers. Punctuality and reliability of the service, while not quite as good as it should be, is also close to record levels (Figure 3). In PR13 ORR will set new performance targets for Network Rail to meet from 2014-2019; further details can be found in the Draft Determination published on 12th June 2013.

Figure 2: Overall percentage of passengers satisfied 1999 - 2012



Source: Passenger Focus

Figure 3: Public Performance Measure (PPM) against passenger kilometres



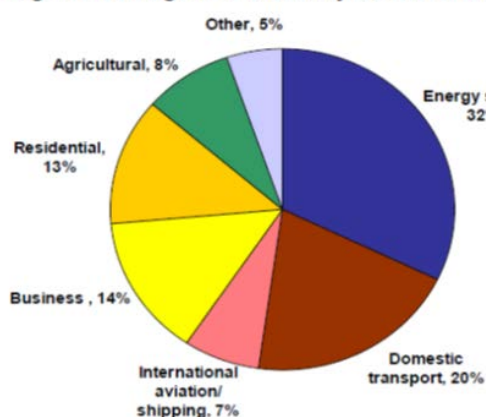
Source: Office of Rail Regulation National Rail Trends

Contribution to Britain's environmental performance

1.15 Rail can support reductions in the carbon intensity of transport for both people and goods, supporting the UK's commitment to reduce its carbon emissions overall in response to concerns about climate change. All transport accounts for 20 per cent of the UK's emission of CO₂, however rail emits significantly less carbon per passenger kilometre than other modes. Modal switching to rail can therefore reduce total carbon emissions from transport. Additionally, measures are being taken to reduce the rail industry's carbon emissions further through the electrification of track, which allows carbon-intensive diesel locomotives to be phased out.

Share of total UK carbon emissions from (i) transport and (ii) rail (2009)

Total UK greenhouse gas emissions by source sector, 2009

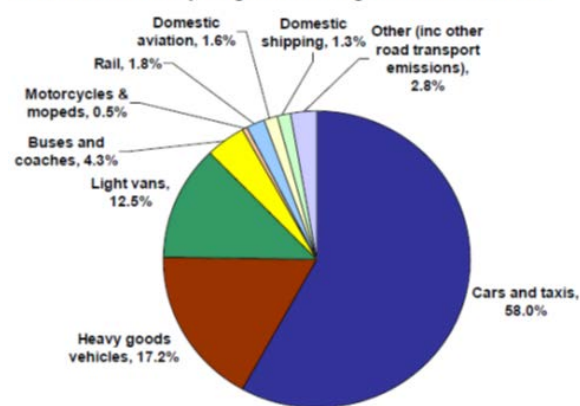


Total UK GHG emissions in 2009 = 607.2 MtCO₂e

Other: Public, Industrial processes, Waste management and Land Use and land use change and forestry (LULUCF)

Source: National Atmospheric Emissions Inventory (NAEI)

UK domestic transport greenhouse gas emissions, 2009



Total UK domestic transport GHG emissions in 2009 = 122.2 MtCO₂e

Other' is mostly 'military aircraft and shipping', and also includes emissions from 'aircraft support vehicles' and from road vehicles running on liquefied petroleum gas (LPG).

Source: National Atmospheric Emissions Inventory (NAEI)

1.16 Rail also contributes to other sustainable development in other ways, including by developing effective environmental management practises at depots, working with the Environment Agency and local authorities on flood risk management, and management of noise pollution. Network Rail is increasingly focusing on reinforcing the resilience of the network to extreme weather events, which have become more frequent in recent years. In PR13 the ORR is proposing to support Network Rail's approach to asset management by strengthening the resilience of the network and understanding risks associated with climate change.

An ever-safer railway

1.17 ORR is the health and safety regulator for the whole of the rail industry, responsible for safeguarding the public by challenging the industry to identify and assess risks properly and comply with the law. ORR pushes for excellent health and safety management at every point in the industry, because the railway is a system and all businesses in that system need to be sufficiently

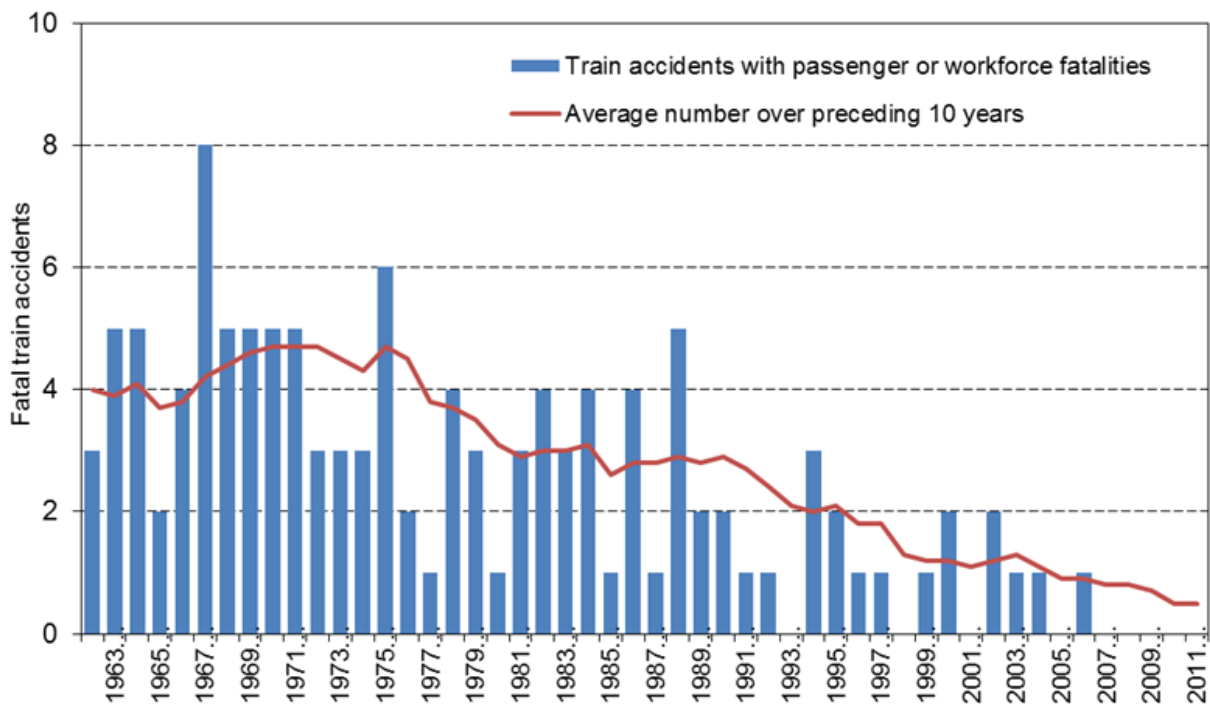
good at managing risk that it becomes increasingly unlikely that they will fail through dips in individual performance, leading to injury or ill health.

1.18 Any business which either creates a risk or is partly responsible for a shared risk, must effectively manage that risk. This is irrespective of that business's profitability, availability of resources, or how long any contract they hold has left to run. This applies as much to ORR's dealings with Network Rail and HS1 as with franchise operators, the freight sector or the supply chain.

1.19 ORR's role as health and safety regulator is to safeguard the public by challenging the rail industry to improve its health and safety performance and prevent people being killed, injured or made ill as a result of its activities. The industry's recent safety record, as measured by the number of adverse events that are happening, is good and underlying risks are reducing. Although we can't be complacent, the industry is now among the safest in Europe (Figures 4 and 5).

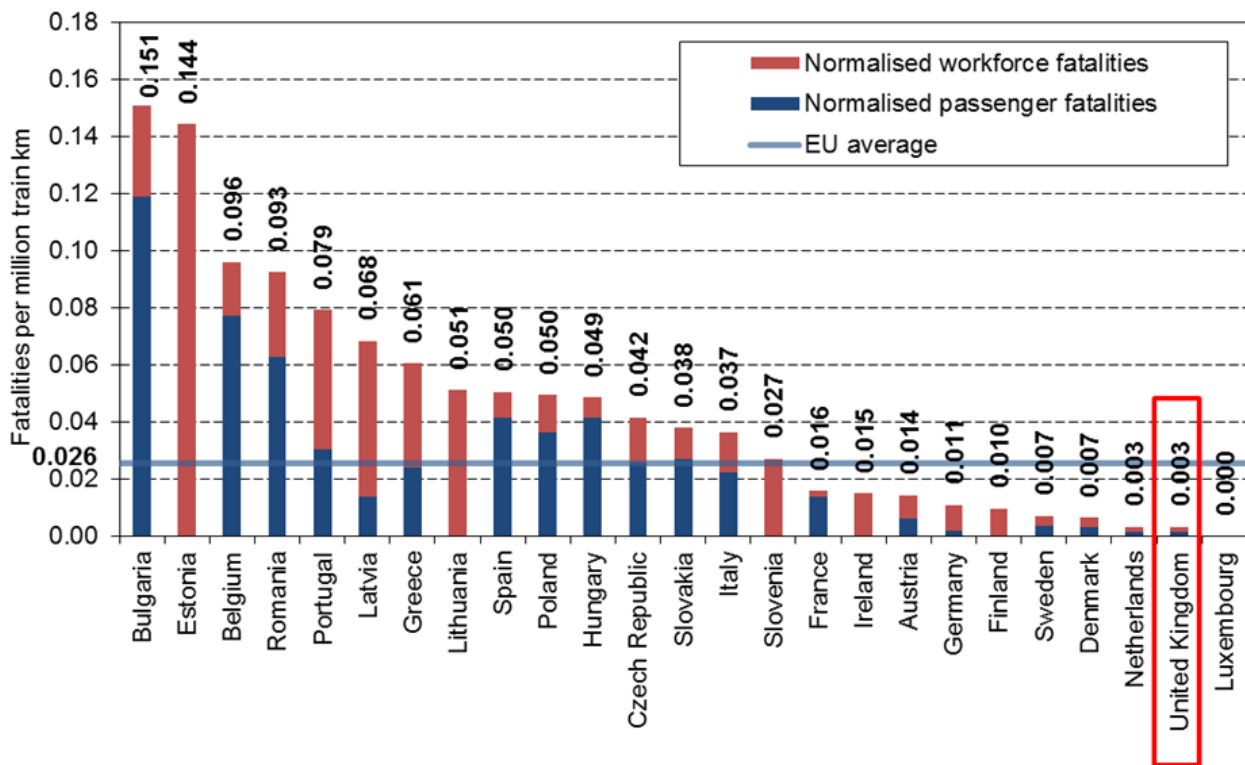
1.20 ORR has a health and safety strategy for the railways that sets its vision and priorities as a combined economic and safety regulator. ORR's regulation focuses on business risk, recognising that business risk includes commercial risks and health and safety risks. Health and safety is not an overhead or an optional add-on. It is a fundamental requirement and it is good for business.

Figure 4: Train accidents with passenger or workforce fatalities



Source: RSSB Annual Safety Performance Report 2011/12

Figure 5: Passenger and workforce fatality rates on European Union railways 2007-2010



Source: RSSB Annual Safety Performance Report 2011/12

1.21 The rail industry in mainland Britain is made up of many businesses. ORR oversees how those businesses work together to keep the rail system safe. ORR’s role is to motivate businesses to have excellent health and safety management and to check that they identify and assess risks properly, control them effectively and comply with the law. Businesses are expected to achieve proper control of risks by having an excellent safety management system. Leaders in the rail industry must understand their risks and how to measure their performance in controlling them.

1.22 ORR’s major concern is to secure high standards of protection from catastrophic train accident risk without businesses losing sight of other risks that need to be controlled, such as asbestos or falls from a height.

1.23 Evidence is required of what is being done by businesses to control health and safety risks. ORR actively seeks evidence through inspections, investigations of incidents and permissions for certain activities, and it strikes a balance on the resources we allocate to each. At all times, ORR acts fairly and compares evidence against consistent standards of what businesses should be doing. ORR can use its enforcement powers to require improvement if that is needed.

1.24 A railway system which is designed with safety in mind from the outset is more likely to deliver a railway that can be operated safely and efficiently for years to come. In line with economic

regulation of new investments, ORR expects careful thought during the design process to eliminate risks or reduce them where possible.

1.25 ORR works with other European regulators to help deliver sensible regulation and a common European approach. This is so that trains can run through the Channel Tunnel to British and European destinations safely, and so that trains built in one country can operate in another. Like our European partners, we keep the legal framework for safety on the railway under review and can propose changes if necessary.

1.26 Overall ORR wants the industry to achieve excellence in health and safety culture, management and risk control so that there is continuous improvement in line with best practice and, over time, there is sustained compliance with the law and less need for intervention by ORR.

1.27 To help the industry achieve this we have developed a management maturity model (RM3) that helps us understand the strengths and weaknesses of an organisation in terms of management capability. This not only helps us with prioritisation or supervision activities but also is being adopted by a significant number of duty holders themselves.

Joined-up health & safety regulation

1.28 One of the most important aspects of ORR's recent regulatory experience is the successful integration of economic and health and safety regulation in 2006 following the transfer to the ORR of the responsibilities of HM Inspectorate of Railways from the Health and Safety Executive.

1.29 The government has directed that it wants rail safety to be maintained and improved in the most efficient way, recognising the diversity of the railway network, and which also makes the best use of the money available and provides value for money for both fare-payers and the taxpayers. ORR is able to deliver these dual objectives because it takes a joined-up approach to its responsibilities as the economic, safety and competition regulator.

1.30 ORR includes issues of health and safety when considering the regulation of Network Rail during the Periodic Review process, when it decides what Network Rail has to deliver over the regulatory period and how much this should cost. When ORR does this, it takes safety into account so that the government's priorities are met.

1.31 In the PR13, the Draft Determination has been informed by the current health and safety risk profile presented by Network Rail's operations and our assessment of Network Rail's ability to manage those risks. This analysis has led to a number of decisions by ORR related to safety

analysis, and these illustrate the benefits from joined-up regulation on economic and safety matters.

ORR has, for example:

- assumed a different profile for efficiency assumptions for track with higher maintenance spending in each year of CP5 because of its concern about how rapidly Network Rail can introduce changes without potentially compromising safety;
- strengthened the outputs framework and indicators for asset management, and will be monitoring Network Rail's delivery of planned asset maintenance and renewal volumes, as well as the network's resilience to extreme weather events;
- ensured that Network Rail takes account of its own risk ranking process so that civil structures assets with a high probability of failure and very significant consequence from that failure are prioritised in the maintenance and renewal programmes in CP5; and
- included a ring-fenced fund of £10m for the development of new technologies to alert track workers to the approach of trains.

2. Financial sustainability and funding

Summary

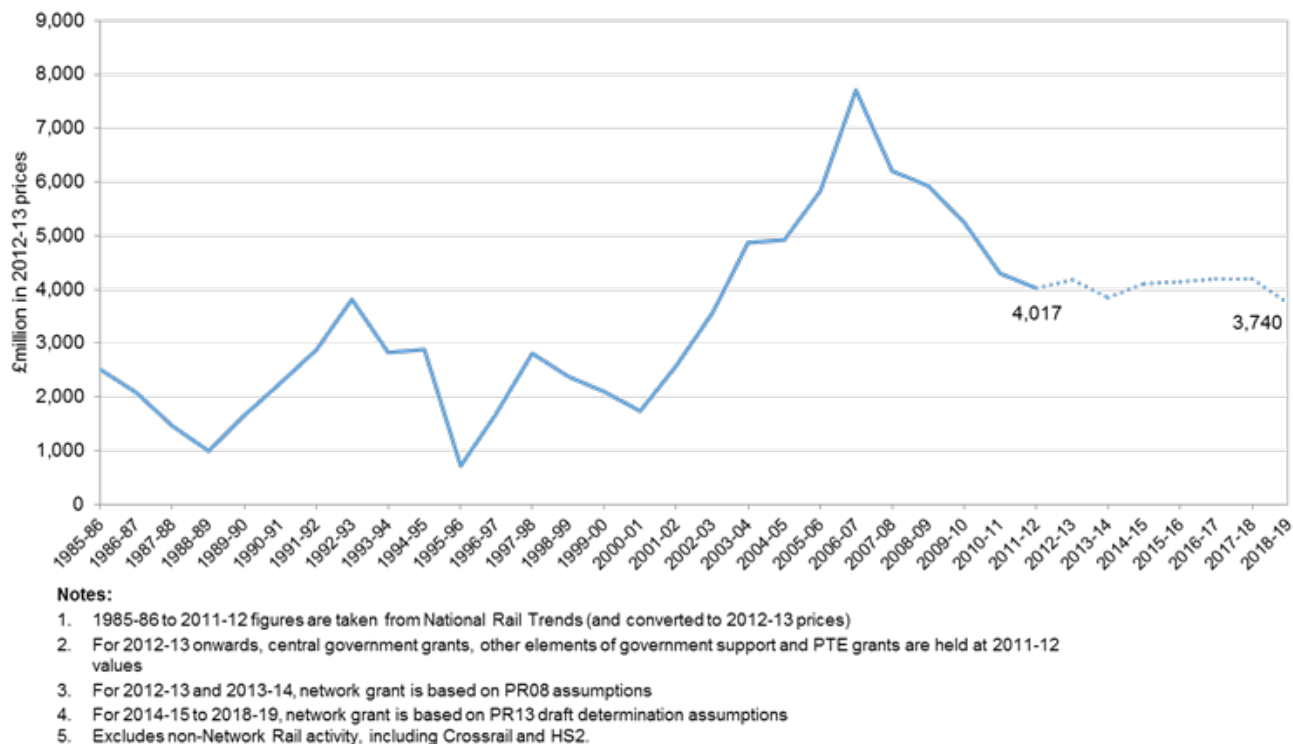
- The financial structure of the railway, and especially the ability of Network Rail to use its balance sheet to fund investment, has effectively supported high levels of investment over the last ten years, and probably a smoother investment profile than if there had been direct funding by government.
- Continued and high levels of public financial support for the sector makes it important that it is increasingly financially transparent and accountable, and that it ensures that on-going levels of investment are sustainable over the long term.
- Decision-makers in industry and government need to be clear about what they are financing and what benefit they seek from it, where the revenue to support investment will come from, and the risk that is associated with it. This requires a better understanding of true costs and a better reflection of those costs in the price of infrastructure services.
- The challenge for rail is to ensure that the current funding model remains sustainable and affordable in light of the continued high level of investment that is anticipated to be needed to keep up with demand on the existing network, in addition to the need to fund significant additional new investments like HS2.
- The financial structure of the industry has an important effect on incentives for efficiency and performance. The industry needs to be able to finance its costs, raise new funding to support investment, and structure its finances in a way that creates and strengthens real incentives for efficiency.

2.1 The recent success of Britain's railways has been driven by a number of factors, but perhaps the most significant is the considerable level of investment that has been made in the industry in recent years. Inevitably, this success also creates some challenges for the future; in particular the imperative to achieve an affordable and sustainable financial position across the sector as a whole.

2.2 Successive governments have re-affirmed their commitment to continued investment in rail. During the current period of fiscal consolidation, it is notable that public investment in rail is continuing to grow. Figure 6 shows the continued public support to Network Rail from 2013

onwards, but does not include the significant additional commitments to non-Network Rail investments like Crossrail and HS2.

Figure 6: Total government support to the rail industry (£ millions) including PTE grants 1985-86 - 2011-12



Source: Department for Transport

2.3 The critical question, recently highlighted by Sir Roy McNulty’s study of rail costs, is whether this level of public subsidy is sustainable and whether future governments will continue to invest in rail infrastructure. Through ORR’s last two Periodic Reviews, over the last decade, Network Rail has reduced the day-to-day cost of the railway by 40 per cent. On top of that ORR’s Draft Determination for PR13 shows that Network Rail has the opportunity to improve the efficiency of maintenance and operation of network infrastructure by a further 20 per cent, and our approach to assessing the efficiency of enhancement projects will develop this further over the period. If Network Rail can meet this challenge then ORR believes that the efficiency gap for the network infrastructure, identified by the McNulty review, will have been addressed by 2019-20 with infrastructure among the more efficient in Europe, although costs in the industry as a whole still have a way to go.

2.4 In order to continue to grow, and win new investment in the future from both the public and private sectors, the industry must be able to demonstrate that it is capable of delivering value for money. Governments in London and Edinburgh choose to buy certain things from the railway, such

as new strategic investments in capacity, or to subsidise services that would not otherwise be commercially viable but which generate social or environmental benefits. To support the credibility and legitimacy of these on-going public commitments, the railway industry needs to be able to demonstrate that it is able to achieve a sustainable financial position for the great majority of the rest of the network and its services, with much less long-term reliance on public subsidy wherever possible.

2.5 It is also important that the industry has accurate and detailed information about what it actually costs to run the railways. Transparency of information about the true costs of different services and routes is essential if government is going to be a discerning procurer of additional services that it wants to pay for. This is why ORR now publishes the annual GB Rail Finances report, which shows increasingly detailed information about the costs of different parts of the network and their relative reliance on public funding.

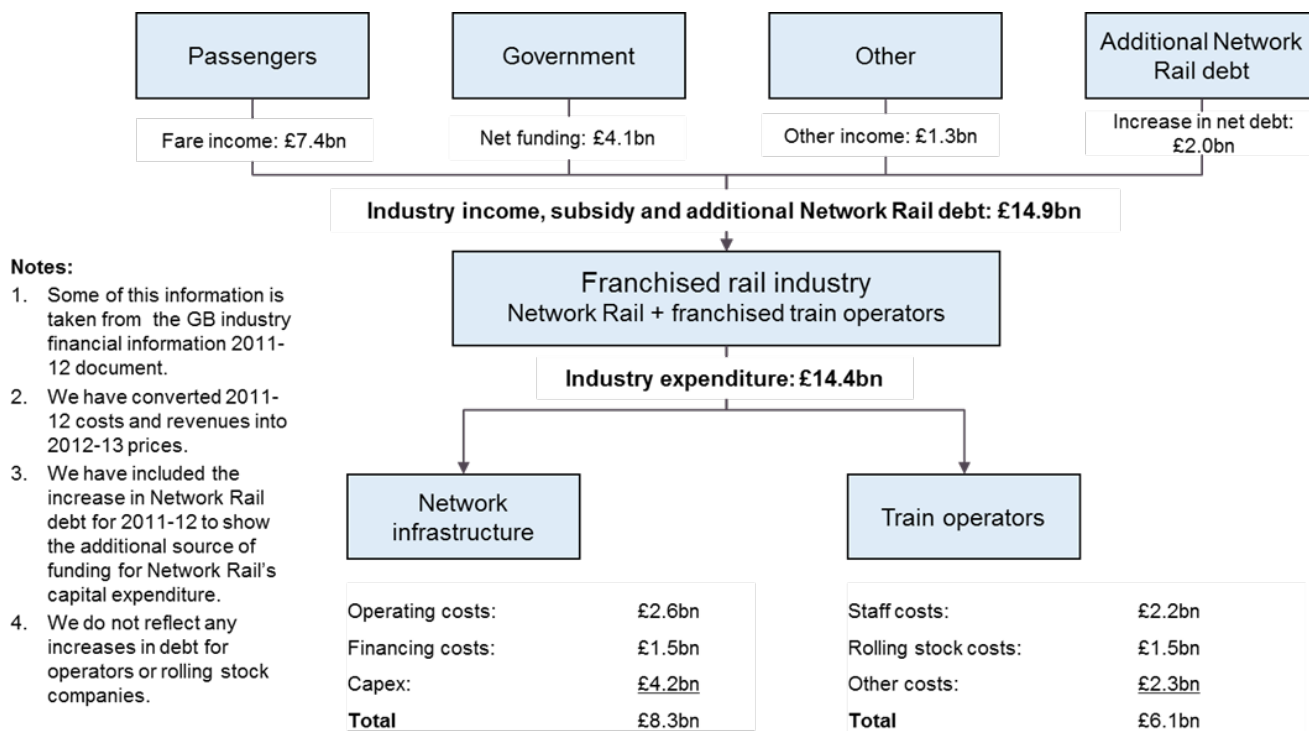
Benefits and consequences of the funding framework

2.6 The funding structure of the railway is complicated, and some of the challenges created by this complexity are outlined below. There is no doubt however that the current framework has been extremely effective, since the last major re-organisation with the creation of Network Rail, in supporting a constant and relatively high level of investment in the railway, reversing the decades of under-investment suffered for much of the post-war period.

2.7 The pivotal factor has been the ability of Network Rail to borrow from capital markets to smooth investment flows over time, with less recourse than there would otherwise have been to direct funding from government, although this too has been relatively high since 2001. This has been supported by independent economic regulation using a RAB-based approach. The ability of Network Rail to borrow on its own balance sheet like this, and to pay the costs of that borrowing, has nevertheless been directly supported by government through the provision of the Network Grant and by the government's assurance to investors that it guarantees Network Rail's repayment of that debt.

2.8 The challenge for rail is now to ensure that the current funding model remains sustainable in light of the continued high level of investment that is anticipated to be needed to keep up with demand on the existing network, in addition to the need to fund significant additional new investments like HS2.

Figure 7: Industry income and expenditure in 2011-12



Source: ORR

2.9 Financial sustainability is particularly important in rail because of the long-term nature of the assets and the long payback period from new investment. Financial sustainability means that the rail industry must be able to:

- raise finance to support investment;
- cover its financing costs; and
- structure its funding in a way that allocates risk effectively and so creates incentives for efficiency across the whole industry.

2.10 The industry requires substantial levels of investment to support its current and projected growth. These continued high levels of investment, together with the need to continue paying the financing costs of past investment will place a substantial demand on the funds available to the industry.

2.11 In addition to the funds available from fares and other sources of ancillary income, a substantial proportion of the industry's financing is still provided directly by taxpayers through the Network Grant to Network Rail. Government also underwrites much of the financial risk associated with the rail industry through the guarantee that it provides in support of Network Rail's debt. The UK and Scottish governments also take risk through the franchise contracts.

Structure and incentives in Network Rail

2.12 Network Rail has an unusual corporate structure. It is a private company limited by guarantee; its balance sheet comprises debt without equity, other than retained earnings; and its debt is guaranteed by government. In place of equity-owning shareholders it has a group of ‘members’, which each commit a token £1 to the company and are constituted to hold the company’s Board to account.

2.13 There are benefits from Network Rail’s CLG status and financing structure, which has allowed the company to deliver a massive investment programme, supported by independent economic regulation using a RAB-based approach, described below. The structure also reduces the risk that, as a monopoly, the company could be run in pursuit of excessive profits to the dis-benefit of the railways customers and funders.

2.14 There are also risks involved with this structure. Network Rail does not face the same level of commercial pressure to manage its debt in a way that a business usually would. Because of the government guarantee, lenders face no default risk and are theoretically willing to meet the company’s financing needs without the sort of financial covenants that would be otherwise required. The natural checks and balances that normal companies face are limited in this instance, because the liability for meeting financing costs rests ultimately with taxpayers rather than with equity holders and lenders. It could allow excessive risk to be built up in the company’s balance sheet if the future cost of servicing unconstrained debt growth rises to an unsustainable position. This is why ORR imposes a licence condition on Network Rail that caps debt at a ratio of 75% to the value of its regulated assets.

2.15 While the absence of shareholder equity means that the company is not run in pursuit of excessive monopoly profits, this does also reduce the natural incentives on management to pursue efficiency and outperformance. This is a risk that is ultimately borne by customers and the taxpayer. This financing structure, for the same reasons, reduces the effectiveness of any additional financial incentives designed and implemented by the regulator with the objective of improving efficiency or performance.

Debt burden and financing costs

2.16 In common with many other regulated network service providers, Network Rail finances investment using its ‘regulated asset base’ (RAB). In general terms, the RAB is a financial construct which reflects the value of the assets that Network Rail uses to provide infrastructure services. The regulatory regime provides assurance that Network Rail will be allowed to recover

the efficiently incurred costs of these assets through access charges. The statutory duties of the regulator, and its independence from government, mean that investors can rely on this assurance, and are therefore prepared to finance investment in these assets at a cost that reflects the lower level of risk, and over a long period, thereby allowing the costs of the assets to be recovered over a period that better reflects their lifespan. For historic reasons associated with the way that Network Rail's RAB was created and added to over the years, it is only a partial reflection of the true and sustainable value of the assets that the company is responsible for.

2.17 Figure 8 below shows how Network Rail's debt has risen since 2004 to exceed £30 billion in 2012/13. This reflects the investment it has made in infrastructure in line with specification by the UK and Scottish Governments of what they wanted to be delivered and were prepared to fund. Excluding the rolling stock leasing companies, the vast majority of the rail industry's debt sits with Network Rail.

Figure 8: Network Rail's past and projected debt



Source: Network Rail Strategic Business Plan for England and Wales for CP5 – 2014-19

2.18 The increase in Network Rail's debt has led to the cost of financing its debt to rise as a proportion of total costs. Figure 9 below illustrates the fact that more than one-quarter of industry costs now directly relate to the capital costs of historic infrastructure investment incurred by Network Rail through debt financing costs and the amortisation of past investment. Figure 10 shows that the proportion of industry income that comes directly from government is still around one-third of all income, with passenger fares currently accounting for most of the remainder.

Figure 9: Composition of industry expenditure in 2011-12

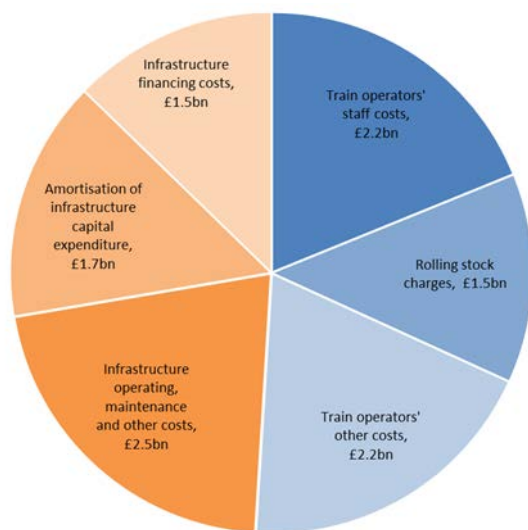
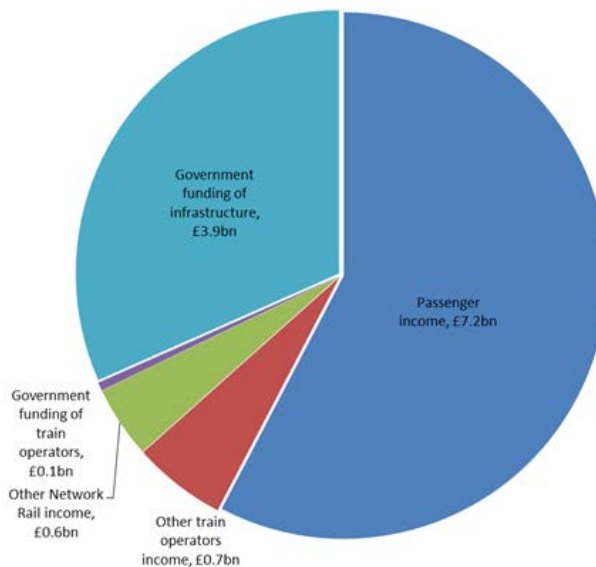


Figure 10: Composition of industry income including government funding



Source: Office of Rail Regulation, GB Rail Industry Financials 2011-12

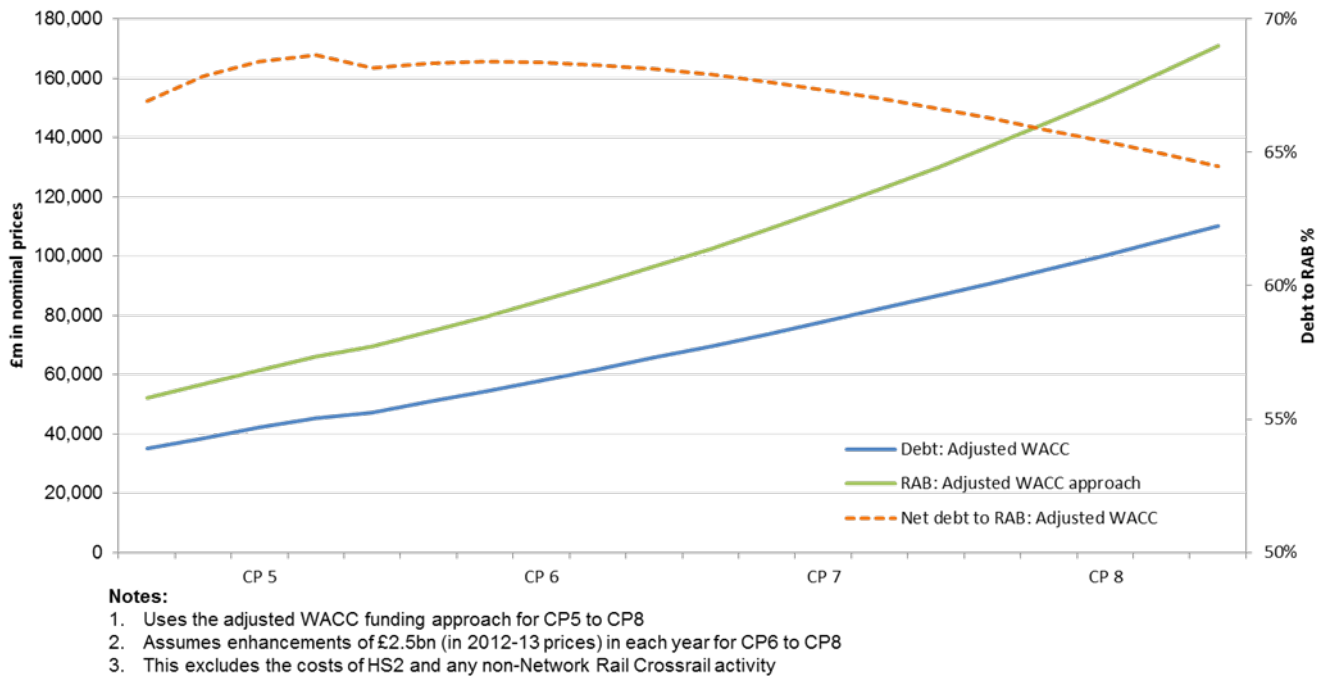
2.19 If Network Rail continues to invest at current levels, the efficient cost of this additional investment will be added to the RAB, and will need to be financed. The impact on financing costs will depend on how that investment is funded.

2.20 Figure 11 below illustrates the increase in these costs, and also the increase in Network Rail's RAB, over successive control periods on the basis of certain assumptions about Network Rail's financing and investment profile. The reasonable assumptions used in this projection are that:

- after CP5 (2019) Network Rail continues to invest £2.5 billion in enhancements to rail infrastructure every year to 2034. This reflects the average level of investment made and planned in CP4 & CP5 (2009-2019). This does not include the cost of additional enhancements not funded by Network Rail, such as Crossrail and HS2;
- the expenditure on the renewal of existing rail infrastructure in each year after CP5 reflects the same underlying level of activity as assumed for CP5 in our draft determination and also that Network Rail achieves its CP5 efficiency targets;
- assumptions are not made about the potential for productivity gains beyond those proposed by ORR for CP5 in the PR13 Draft Determination;
- Network Rail faces only the cost of government-backed debt, reflecting the way in which the company is currently financed. Nevertheless, the cost of servicing Network Rail's debt will

over time account for a higher proportion of the company's revenue requirement, as shown in Figure 12 below.

Figure 11: Network Rail's debt and RAB from CP5-CP8 (2014-2034)

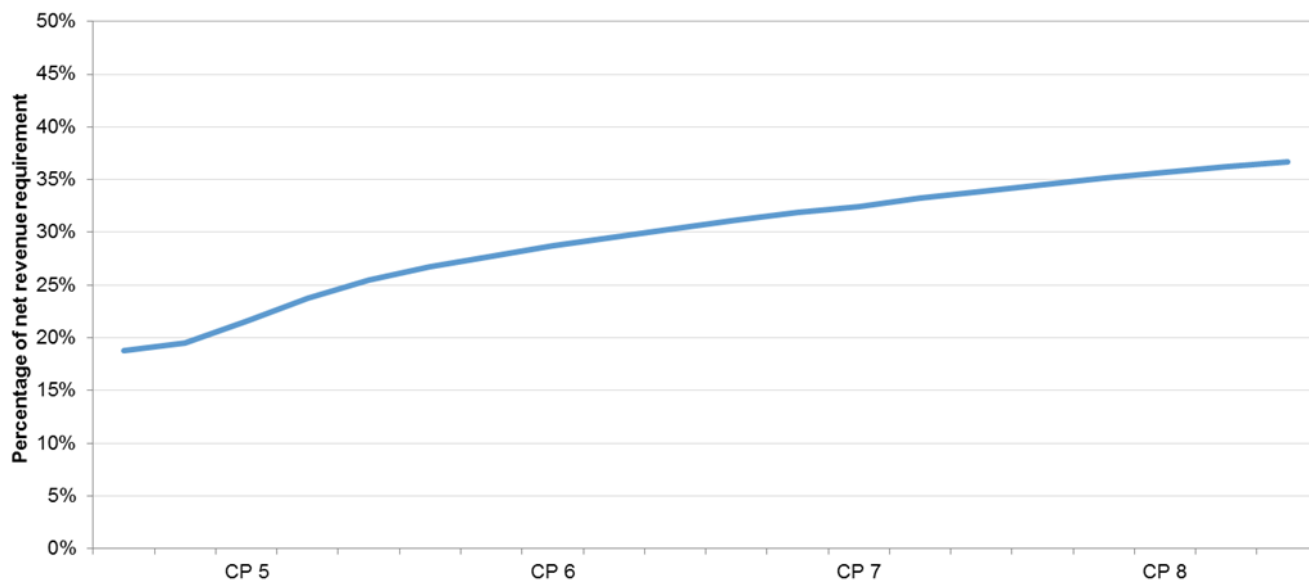


Source: ORR projections for PR13

2.21 Movements in Network Rail's debt and RAB over time are largely driven by the enhancement programmes required by the Governments. Therefore, it is very important that the process for funding those enhancements is transparent and in particular that the costs and benefits of the enhancements are clearly identified and appropriately funded.

2.22 This is particularly an issue given that amortisation based on average long-run steady state renewals does not fund the original construction cost of an enhancement, just the renewals needed to maintain the asset in a suitable condition. This is appropriate for an enhancement that adds long-term economic value to the network, e.g. some bridges and tunnels are over 100 years old and are still in regular use. But if enhancements are proposed, for which the economic contribution they provide to the network in the long-term is lower than their cost, we need to consider how they should be funded.

Figure 12: Network Rail’s projected infrastructure financing costs as a proportion of its revenue requirement (2014-2034)



Notes:

1. Financing costs includes only Network Rail’s cash financing costs, i.e. interest costs and FIM fee
2. Uses the adjusted WACC funding approach for CP5 to CP8
3. Assumes enhancements of £2.5bn (in 2012-13 prices) in each year for CP6 to CP8
4. This excludes the costs of HS2 and any non-Network Rail Crossrail activity

Source: ORR projections for PR13

2.23 Network Rail’s ability to service its debt and to raise additional finance will depend on the continued willingness of governments to provide direct support to the company, and the continuation of a regulatory regime which gives debtors confidence that efficient investment costs spread over a long period will be recovered through the RAB and regulated access charges. The burden on future generations to pay for the costs of historic investment will continue to rise as Network Rail’s debt grows to fund further investment.

2.24 This approach to funding the railway is sustainable for so long as governments decide that it is affordable and choose to provide support to Network Rail in this way. In order to maximise the options available to future governments, one of the most significant long-term challenges facing the industry is how to deliver the enhancement and modernisation of the railway in the most efficient and sustainable way, so to minimise the accrual of on-going cost and risk to taxpayers.

Alternative sources of investment

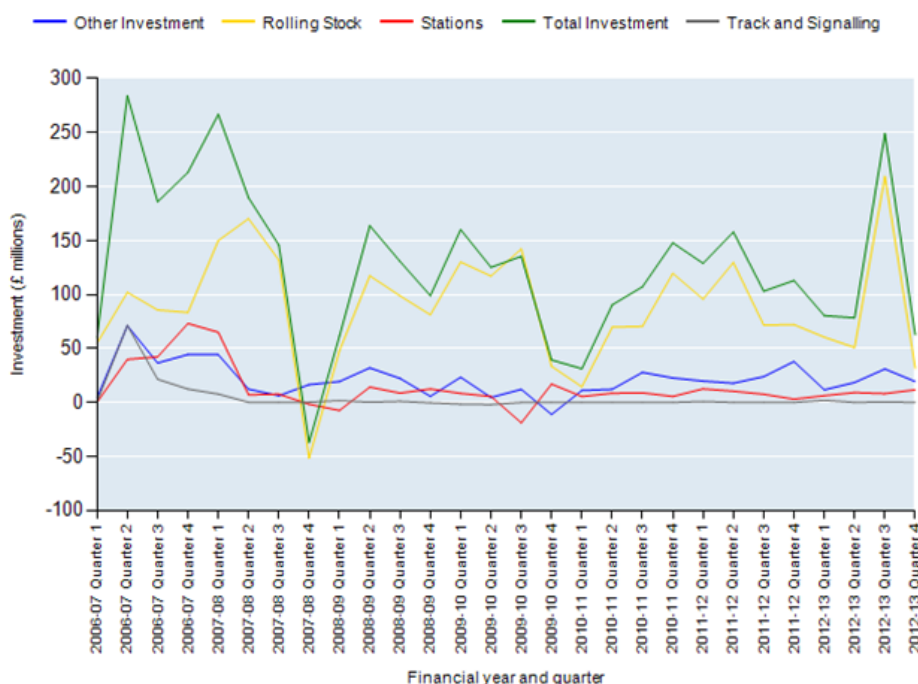
2.25 The railway will not reach a position of being entirely self-financing in the foreseeable future. Apart from the need to pay for past investments, the Governments in London and Edinburgh are always likely to want to make new large strategic investments that the industry could not finance itself. The wider social and environmental benefits created by rail travel, in reducing congestion

and pollution, and connecting communities mean that the marginal cost of new investment often exceeds the marginal financial return generated.

2.26 Despite this, the railway is still notable for its relatively low levels of wholly-privately financed investment in infrastructure compared to other regulated sectors. The main areas that attract private finance are the provision of rolling stock, the rail freight sector, and through the financial commitments made by companies that bid to operate franchised rail services.

2.27 In other regulated sectors the volume of private investment has been much higher. In water, for example, more than £100bn of private investment has happened since privatisation. One challenge facing the sector is therefore the extent to which it is viable or desirable to develop further sources of private finance to fund investment, particularly in network infrastructure, and how this could be used to strengthen the focus on efficiency and customer service in different areas. The recent successful sale of the concession to operate HS1 to a consortium of pension funds demonstrates the potential availability of capital for other areas of rail infrastructure, whether through Network Rail, regulated concessions or some other structure.

Figure 13: Private investment in the railways



Source: Office of Rail Regulation National Rail Trends, Office of National Statistics

2.28 Irrespective of the source of finance, whether public or private, it is necessary for decision-makers to be clear about what they are financing and why, where the revenue streams to support the recovery of those investment costs will come from, and what risk is associated with it. This

requires a better understanding of true costs and a better reflection of those costs in the price of infrastructure services, as the next section describes.

Next steps

- The ORR and government will continue to work towards much greater transparency about the industry's costs and finances. This will improve accountability not only to taxpayers, but also between customers within the industry. It will help governments in London and Edinburgh to be intelligent procurers of investment and services that they value across the network and understand the costs and benefits of broader social environmental and economic objectives.
- In preparation for CP6 the ORR will work with Network Rail and the UK and Scottish governments to look at the structure of funding across the industry and the incentives that it currently creates for efficiency and performance.
- ORR will work with Network Rail and the UK and Scottish governments to ensure that the current funding model remains sustainable and affordable in light of the continued high level of investment that is anticipated to be needed.
- ORR's regulatory approach will be proportionate and predictable, and supportive of any innovations that the industry or government choose to use in developing alternative sources of finance to fund investment in rail infrastructure.

3. Efficient infrastructure and capacity

Summary

- The way that rail infrastructure is provided and managed is undergoing a period of rapid change, with new models of infrastructure delivery and operation being developed in different areas of Britain. Infrastructure alliances are in various stages of development promoting closer working between track and train and stronger incentives for efficiency and operational flexibility and innovation.
- Network Rail is reorganising to devolve operational control to its routes, shrinking management chains and bringing services closer to their customers. This potentially dynamic shift will have greatest effect if government were to change the Network Grant to a more bottom-up funding model that incentivises routes to work with their customers as real commercial operations. ORR is looking at regulatory mechanisms that will support effective devolution.
- Scotland and Wales continue to work closely with Network Rail to develop their own approaches to rail infrastructure that meets the needs of customers and funders in their countries. Integrated local transport authorities like TfL are also pursuing greater interaction with the mainline network.
- During CP5 ORR will review the current structure of regulatory charges in the industry, because they do not currently reflect the true costs of using network infrastructure or create strong incentives for efficient use of track capacity.
- Network Rail will develop its important role as the 'system operator' of the network, where it manages increasingly constrained track capacity on a day-to-day basis as well as judges investment requirements for new capacity as demand for access to the network grows.

3.1 Section 2 showed that around two-thirds of the total cost of running the railway each year is attributable to the operation, maintenance and upgrading of the network infrastructure. This is predominantly the responsibility of Network Rail, which is the monopoly provider of network infrastructure across almost the entire mainline rail network.

3.2 Driving down industry costs is key to delivering better value for money in the rail industry, and reducing the railway's reliance on the £4 billion per annum subsidy that it receives from the

taxpayer. In PR13 ORR defines the efficiency improvements that we want to see from Network Rail for the next five years and beyond. By improving efficiency we will increase the choices available to customers, government and other funders.

3.3 In order to achieve this we need to have a railway that better understands and reflects the true costs of its operation, including access charges that better reflect the true cost of using the network infrastructure. This will allow rail services and investment to be more driven by commercial incentives, and to more effectively deliver what customers value most.

Evolving models of infrastructure delivery

3.4 The way that rail infrastructure is provided is undergoing a period of rapid change. As well as Network Rail reorganising to devolve operational control to local routes (discussed below), the concession to own and operate the HS1 route was successfully let to a private sector consortium. This may pave the way for the possibility of other rail infrastructure concessions in the future, and there is potential value in having comparative performance information from devolved and concessioned routes that may be owned and operated independently. Network Rail has considered the feasibility and business case for the letting of concessions to third-parties to run parts of the network infrastructure, and this may be one approach to developing alternative models of investment and operation.

3.5 Infrastructure alliances are in various stages of development, including between South West Trains and Network Rail in the Wessex region, promoting closer working and the innovation of new approaches to operating, maintaining and upgrading the network in that area by putting track and train under a single entity. The governments in Scotland and Wales continue to work closely with Network Rail, developing close joined-up working between service operators and infrastructure providers to create a more integrated approach to providing transport services in those countries. In England, integrated metropolitan transport authorities, such as those in London and Merseyside, administer their local networks in a joined-up manner. Elsewhere across the network, the Localism Act further encourages the consideration of nationally-planned rail services at a more local level.

3.6 ORR welcome the industry's move away from a one-size-fits all approach towards different models of network delivery that suit the features of the regions and customers that each serves. ORR will continue to adapt its regulatory approach in line with the industry's evolution, including by taking a more comparative approach to regulation wherever possible, as other economic regulators do in water and energy. This innovation of new approaches is an important trend towards rail becoming a more dynamic and financially self-sustaining industry. The development of more disaggregated comparative information about route performance would have the substantial

benefit that it would for allow the regulator to increasingly get out of the detail. We want to allow infrastructure providers greater scope for flexibility and innovation and to be increasingly held accountable for this by their customers in the first instance, and less by the regulator and government.

Operational devolution of infrastructure

3.7 Across the mainline network, Network Rail is doing many of the right things to get closer to its customers. The devolution of decision-making to each of its ten routes is an important step (Figure 14). Devolution should allow route directors much more discretion in how they provide infrastructure services to the train companies; to assess how best to raise performance and improve efficiency in their own areas. Importantly it creates a kind of market for management within Network Rail, with the opportunity to draw comparisons and lessons from different approaches, and ultimately to benchmark comparative performance.

Figure 14: The ten operational routes within Network Rail



3.8 ORR is already using information generated by Network Rail to develop separate regulatory accounts at the route level, and intends to build on this with published route level performance data. PR13 included route-level scrutiny of Network Rail's Strategic Business Plan, and in due course ORR may pursue greater route-level accountability with disaggregated revenues reflecting disaggregated charges. This will make it clearer what customers and taxpayers are paying for in

the different parts of the network, what they are getting in return, and how these contribute to the whole industry's costs. ORR will ensure that devolved and/or concessioned routes are operated in a transparent and non-discriminatory way.

3.9 There is potential for the routes to be powerfully incentivised to strike commercial deals with their customers, and in the process to make sure they make the best returns from the scarce network capacity they have at their disposal by providing what customers want and improving their own efficiency.

3.10 By moving infrastructure management closer to its customers, train companies should have greater ability to act more commercially with Network Rail. Similar to the current alliances, they may broker different options for the delivery and use of infrastructure services, pressing the routes to improve efficiency, and considering their own use of the network to identify ways in which they can reduce the infrastructure costs they pay.

Incentive effects of the Network Grant

3.11 The structure of funding affects the incentives felt by individual routes. While so much of Network Rail's income is received as a block from government, without bearing a direct relationship with the infrastructure service the routes provide to their customers, the routes could essentially remain administrative units rather than dynamic commercial operations. It will be harder to achieve the potential cultural shift within Network Rail and in its relationships with its customers that devolution tries to promote.

3.12 This potentially dynamic shift will have greatest effect if government were to change the Network Grant to a more bottom-up funding model that channels public funds increasingly through services provided by Train Operating Companies, creating stronger incentives for routes to work with their customers as real commercial operations; effectively becoming the principle profit-centres for the company. This would help to align costs and revenues within Network Rail at route level, so that route directors are able to make genuinely commercial propositions to their customers in full knowledge of what their different options cost and what they will earn from them, and with bottom line accountability.

3.13 In the absence of these real commercial imperatives there may be regulatory actions that could strengthen incentives, including the strengthening of route-level accountability mentioned above, although this would be a second-best solution.

3.14 During CP5 ORR will review the current structure of charges in the industry, because they do not currently reflect the true costs of using network infrastructure or create strong incentives for

efficient use of track capacity. As described below, an effective charging structure would reflect capacity and scarcity more closely, including at a route level. There may be an opportunity in CP6 for a substantial rebalancing in the sources of Network Rail's revenue, from block grant to usage and capacity-related prices for the infrastructure services it provides.

Valuing network capacity

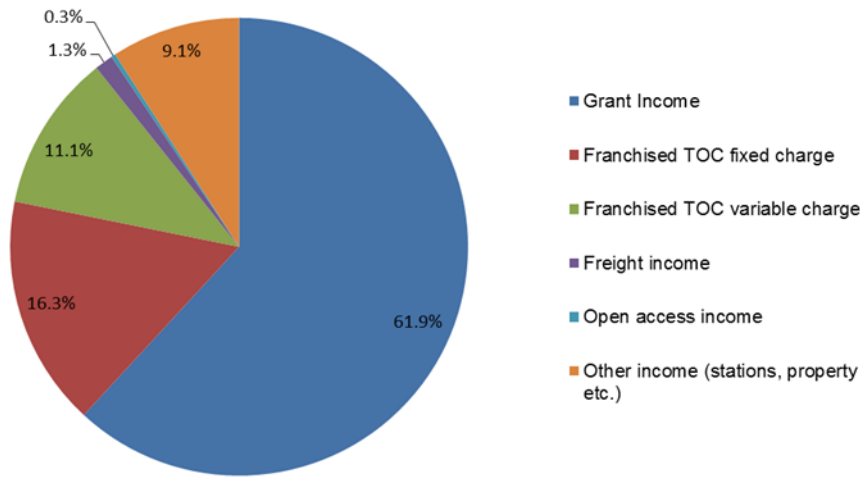
3.15 The capacity of the network to carry passengers and freight is the 'product' that Network Rail provides to its customers. Capacity is, in critical parts of the network, in short supply and under increasing pressure. The relative value of network capacity, including its external value (for example in terms of reduced road congestion) is largely not reflected in the prices that Network Rail charges to its customers for access to the network.

3.16 The Variable Usage Charge, which Network Rail currently charges operators, reflects the short-run marginal 'wear and tear' cost associated with that operator's use of the network. Network Rail also levies smaller incremental charges on top of this, but which do not reflect the full true cost of network use, or the cost of scarcity.

3.17 The cost of scarcity is either the cost of depriving another user of access to the network or the cost of expanding capacity to meet the excess demand. Current charges also do not fully reflect the cost of congestion, which is a cost associated with one operator's use of the network on another user.

3.18 By not properly pricing capacity a key piece of information is missing about where and when network capacity would best be used. Without this information it is unclear whether capacity is being allocated and used efficiently. For example, where there are competing demands for capacity, that capacity should be used by those who value it the most. Proper prices for capacity would provide this information. Since it is expensive to create new capacity, it is important that we can be sure that existing capacity is being used efficiently before there is investment to provide more of it. Again, more cost reflective pricing would provide this information.

Figure 15: Breakdown of Network Rail's revenue requirement

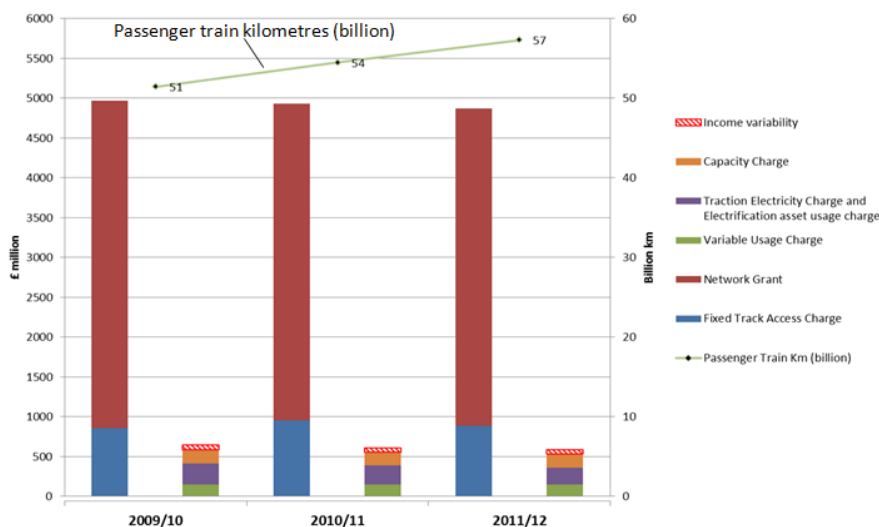


Source: Office of Rail Regulation

3.19 Figure 15 shows the proportion of Network Rail's income coming from different sources. It shows that charges income earned by Network Rail account for less than one third of its revenue. Of this income, less than half varies with the level of traffic on its network.

3.20 Figure 16 shows how Network Rail's effort to accommodate more trains on to its crowded network over the last few years has had a disproportionately small impact on the revenue generated for the business. Though it has allowed more trains to run and for capacity to be used more intensively there has been almost no impact on revenue.

Figure 16: Relationship between passenger growth and Network Rail's income



3.21 The low proportion of Network Rail's income which varies with traffic volumes, accompanied by very powerful performance incentives, means that there are limited benefits to the company

from making normal commercial trade-offs about how much capacity to make available. Regulation attempts to compensate for this through a volume incentive which attempts to encourage Network Rail to make more commercial trade-offs when deciding whether to meet additional demands for the use of network capacity, but this is a sub-optimal solution.

3.22 Since current charges are not fully cost reflective and variable income is low, much of the remainder of Network Rail's income is made up of a combination of a fixed charge paid by franchised passenger train operators and the network grant paid by government. During the next control period ORR will introduce a freight specific charge which will recover a greater share of revenue from freight operators to more closely reflect the true costs that freight creates, based on an assessment of the costs which would have been avoided if freight was not using the network. But even then the existing proportion of network grant will remain high. Although the government does specify what it wants from the railway overall, the structure of this block grant means that there is limited transparency as to how government subsidy specifically is actually being used.

3.23 Since Network Rail is a Company Limited by Guarantee with government supported debt, even if Network Rail were to be exposed to a greater amount of revenue risk through volume risk, there is a question about how motivated it would be to manage that risk. Furthermore, passenger rail franchises are highly specified and franchised passenger train operators are, at present, held neutral to changes in Network Rail's access charges. This means that franchisees have little ability or incentive at present to make decisions about capacity use based on charges even if these charges were to be made more cost reflective, and ORR is arguing that this should change, as described in Section 4.

Strengthening the charging structure

3.24 During CP5, ORR will review the overall structure of charges across the industry, and the strength of positive incentives for performance and efficiency that they create. The review will commence after PR13 has concluded, so that the issues are fully understood ahead of CP6.

3.25 In principle, charges should be simple, rational and easy to understand. If they are not, the information they provide for decision-making is less powerful, and the effects on incentives to provide and use network capacity efficiently are dulled. The experience to date is that where operating companies are exposed to the true costs, then they work very effectively to reduce those costs while maintaining performance. Unlike franchise passenger TOCs, freight companies are exposed to changes in Network Rail's charges, and have worked hard to reduce costs to keep their charges down. Where TOCs are exposed to charges, such as in relation to traction electricity, the

same effect has been seen. Better alignment of incentives in the industry should drive further efficiency gains.

3.26 ORR's vision is of a simpler, more efficient charging structure. It is possible to conceive of a charging structure which reflects the full cost of providing capacity including both short-run wear and tear costs of running trains on the network and the costs of scarcity and congestion. These costs may vary by geography and time of day but we understand the need to balance the pursuit of cost reflectivity with simplicity and practicability.

ORR considers that an efficient charging structure should provide:

- **Cost recovery:** A mechanism for Network Rail to recover the efficient costs it incurs in providing track and station infrastructure used by train operators;
- **Incentives for efficiency of use:** Users make better use of products, including capacity, by responding to signals sent through prices based on cost. Charges provide signals to train operators, their suppliers and funders for the efficient use and development of vehicles and the infrastructure;
- **Incentives for cost efficiency and allocation:** Charges allow costs to be allocated. Where charges allocate costs to those who have caused them to be incurred they provide an incentive to reduce those costs; and
- **Incentives for efficient provision of goods and services:** Charges send signals to providers as to the goods and services they should provide. In this case, charges could provide an incentive to Network Rail to respond to signals sent by users through prices and their consumption decisions about what they are willing to pay for and what Network Rail should therefore provide, as long as those charges cover the cost of provision.
- **Fairness, stability and predictability:** To support long-term investment in the railway, the impact on different customer groups will be important to understand. The distributional and commercial effect of any revised charging structure would need to be considered carefully.

3.27 It is possible that a charging structure based on these lines would still not meet Network Rail's revenue requirement in full. If it was considered desirable to eliminate the Network Grant entirely then an additional charge would need to be included.

3.28 To be effective, cost-reflective charges will depend on there being flexibility in existing commercial relationships so that the industry is able and incentivised to respond to the incentives that charges create. But even without these changes the development of an efficient charging structure should provide much richer information than exists currently. It could even act as a

catalyst for change since it will facilitate more informed decision making and support emerging industry structures and changing operating environments.

In PR13 ORR is taking a number of steps to improve the structure of charges and aligning it more closely with the objectives outlined above:

- A freight specific charge is being introduced on commodities that can bear it so that freight pays more of the costs it causes, costs incurred are more transparent and subsidy is diverted from areas where it has little effect on behaviour towards more effective uses.
- The volume incentive is being improved and strengthened which, in the absence of a scarcity charge, is the mechanism that gives Network Rail an interest in responding to its customers' demands for additional access to network capacity in a more commercial way.
- ORR has asked franchising authorities to expose new franchised TOCs to consider exposing new franchised TOCs to other variable charges and to the fixed charge.
- The Schedule 4 and 8 rates and the capacity charge (through which operators pay for the performance impacts of the congestion they cause so that network externalities are more accurately captured) are being recalibrated. We will not be implementing all aspects of the recalibrations in CP5, thereby allowing businesses time to adapt to changes.
- A Route-level Efficiency Benefit Sharing (REBS) mechanism is being introduced. In the absence of fully effective charges this mechanism increases passenger and freight train operators' interest in costs by exposing them to cost variations over the control period.
- The latest estimates of the variable usage charge are being phased in, subject to a cap, so that they are more cost reflective; we have further strengthened the incentive properties of EC4T charges and better geographically disaggregated the fixed charge.

Effective system operation

3.29 Good system operation is about maximising available capacity, by minimising network constraints, while allocating that capacity in a way that successfully balances competing customer needs. The importance of good system operation will continue to increase in a world where there is increasing and competing demand for use of an already constrained network, and especially in a more devolved and more disaggregated network.

3.30 System operation is a feature that is common to many network industries. Electricity transmission, the gas supply and storage, and air traffic control are all examples of sectors where the management of the network is a distinct operational area, separate to activities like infrastructure maintenance or the sale of services.

3.31 The concept of system operation is not new to rail; it originated in rail. In a rail system where different models of route-level infrastructure delivery are developed it is increasingly important that there is a central coordinating function managing interoperability.

3.32 As in other network industries, a helpful analytical tool for thinking about system operator functions is to split them in to three timeframes: the short, the medium and the long-run:

- The short run is about service reliability and dealing with short-run access issues. The system operator owns the processes and protocols for traffic management and dealing with day to day operations.
- The medium run is about trading-off competing uses of capacity, which include its use not only by operators to run trains but also by Network Rail to manage performance risk and to work on the network, e.g. to maintain and renew it. System operator functions involve timetabling and decisions about access to the network e.g. implementing and assisting in the enforcement of the regulator-set regime for capacity allocation and contract approval.
- The long run is about planning future capacity. System operator functions include providing the necessary information to inform decisions on network expansion including identifying where bottlenecks exist, and what action might be taken to alleviate them efficiently in the long run. Delivery of these actions might be part of the system operator's role or carried out by a third party.

3.33 In some network industries, such as water, the short and medium term functions are generally less important than decisions about long-term investment. However, in rail all of the functions are critical. This is particularly true where parts of the network have many connections to other parts (so short term problems can have significant knock-on impacts) and where the infrastructure is congested. Geography matters more in rail and the 'traffic' being moved is not electrons or molecules but people and freight on trains.

3.34 Good system operation can help to bring about more efficient and responsive operation and development of network infrastructure. Effective system operation may allow the regulator to intervene less in decisions on network access. In rail the outcomes of good system operation will likely include:

-
- ensuring that competing demands for access to the network (including from Network Rail itself) are dealt with transparently and in accordance with an understood set of rules;
 - facilitating more coordinated decision making and maximising network benefits by reconciling demands for access to the network from multiple operators, from Network Rail and from operators across devolved routes;
 - facilitating the smooth and efficient operation of interfaces with adjoining rail infrastructure e.g. LUL and freight terminals and supporting efficient integration with other transport modes;
 - providing and utilising high quality information about the quality of the network including where network constraints exist, where there is spare capacity and the condition of network assets and making use of this information in deciding what action to take and when; and
 - aiming to maximise value for money when carrying out long term planning in respect of long lived assets where the future is uncertain.

3.35 As part of PR13 ORR is working with Network Rail to identify metrics that will allow Network Rail and ORR to understand better how effectively system operator functions are being performed including how well capacity is being managed. Measuring performance is complex because system operation is multifaceted, and encompasses a range of diverse functions, conducted over different timeframes. So we expect that measurement will be in the form of a dashboard containing a range of indicators.

3.36 Network Rail is expecting to publish its performance against the metrics on an annual basis throughout CP5. ORR will not attach financial incentives to these metrics in CP5, but may do so in subsequent control periods. In some other regulated network industries, system operation functions are explicitly incentivised to improve or maintain performance. In some sectors the system operator has a distinct governance structure, with split boards or even entirely separate ownership. This structural separation has probably gone furthest in air traffic control, where NATS is owned in part by a consortium of its customers.

Next steps

- ORR supports the innovation of new models of infrastructure delivery within and outside Network Rail, and will adapt its regulatory approach in response to new models that have the potential to strengthen incentives for efficiency and performance improvement.
- ORR will strengthen the incentives that it creates through regulation in CP6 to support effective and dynamic management of network infrastructure at the route level, developing a more comparative approach to network regulation.
- ORR will continue to make the case to government that the structure of funding the industry through the Network Grant should adapt to increasingly fund services rather than infrastructure, so to strengthen the customer relationship between Network Rail and the TOCs to drive for efficiency and performance.
- Following PR13, ORR will review the structure of charges across the industry, including in consultation Rail Delivery Group of industry representatives, to ensure that the charging structure is simple, efficient, reflects true costs and creates normal commercial incentives to provide and use network capacity efficiently.
- ORR will continue to work with Network Rail to define the role and benefits of effective performance of system operator functions that includes actively managing capacity and creating flexibility on an increasingly diverse and busy network, potentially reducing the role over time of the regulator as arbiter between competing demands for track access.

4. Supporting an industry working more closely together

Summary

- The rapid pace of change across the rail sector means that an opportunity exists to develop a more commercially self-sustaining industry, with less need for government and regulatory involvement overall.
- The Rail Delivery Group (RDG), that brings together the freight operators with Network Rail, ATOC and passenger operators, is enhancing whole-industry strategic dialogue. More aligned incentives are also needed to promote common cross-industry cooperation to deliver the next round of efficiency and performance benefits - especially between TOCs and FOCs and Network Rail.
- All stakeholders, including government and regulator as well as the industry itself, must do more to put the consumer at the heart of the railway and decisions that are made about investment in infrastructure and services.
- More transparent and disaggregated information about service outputs, costs, and where public investment actually goes is essential, and will support better decision-making across the industry.
- Passenger and freight operators should be strong and demanding customers of Network Rail. ORR is taking some actions to strengthen cross-industry working, and give them greater influence. This would be aided by greater commercial flexibility in franchises, and by exposing operators to both the costs and benefits of Network Rail's performance.
- European regulation is seeking to open up cross-border rail markets, and this should create real commercial opportunities for British companies in future years.

4.1 If the railway is to grow sustainably by innovating and developing new services and attracting new passengers and freight, then it needs to become increasingly self-sustaining and less reliant on government for direction and for finance. An industry that is increasingly able to act autonomously, and which puts its customers first, should be able to make an even greater

contribution regionally and nationally to connectivity, well-being and economic growth, with less need for regulatory intervention.

4.2 Markets in rail services need to become progressively more efficient at delivering value for users and funders at every level. Aligning incentives throughout the industry is the most effective route to creating a financially sustainable industry that best meets the needs of its customers in an efficient and safe manner. In doing so there is no trade-off between safety and efficiency, because a well-run railway is both safe and efficient.

4.3 The next substantial advances in the quality and efficiency of the industry will be very hard to achieve without a more commercial, customer-focused, approach that includes:

- tackling barriers which inhibit collaboration between the infrastructure provider and train operators to improve whole-system performance and efficiency for customers;
- a stronger focus on delivering for customers;
- significant advances in asset management and information;
- greater transparency on how public money is being used, and what the railway is delivering with it;
- greater simplification of the standards and rules which in many cases are so bureaucratic and prescriptive that they undermine the management of the risks they are supposedly there to support;
- improvements in maintenance and renewals productivity; and
- a move away from the traditional one-size-fits all approach to delivering infrastructure and that responds flexibly user needs.

4.4 The Rail Delivery Group (RDG), that brings together the passenger and freight operators with Network Rail, ATOC and other industry stakeholders is enhancing cross-industry strategic dialogue and should seek to lead the sector's development towards a more autonomous and joined-up position. ORR recognises that more aligned regulatory and policy incentives will also be needed to promote common cross-industry cooperation to deliver the next round of efficiency and performance benefits - especially between TOCs and FOCs and Network Rail – as this section describes.

Consumers at the heart of the railway

4.5 Improving the experience of consumers is a core part of ORR's duties:

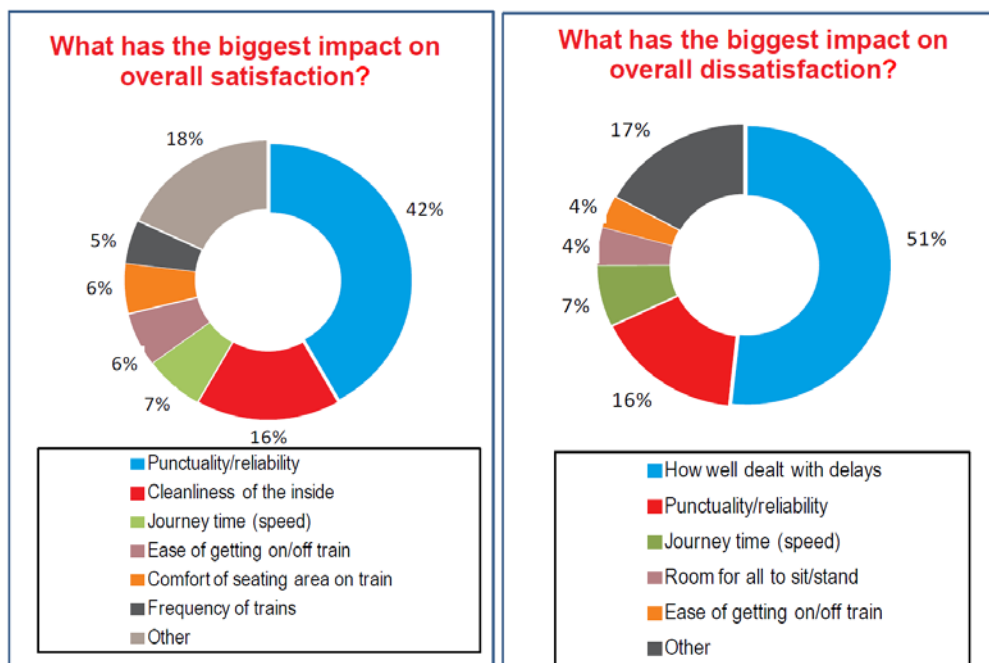
-
- Many of ORR's statutory duties relate to protecting the interest of users of railway services or promoting the use of the railway, which includes (but is not limited to) consumers;
 - ORR is the sectors' consumer and competition authority, protecting consumers from anti-competitive abuse of market power and promoting competition wherever possible;
 - ORR has a number of new responsibilities for train operators' maintenance of, and compliance with, passenger complaints handling procedures, disabled peoples' protection policies and for the quality of passenger information during disruption; and
 - ORR's decisions impact on outcomes for rail users - understanding and integrating a good understanding of consumer outcomes is integral to becoming a high-performing regulator.

4.6 Consumers, and the firms supplying rail services, are a better judge of 'good' services and how to achieve them than regulators. It is also critical for a successful railway to offer consumers a safe and trusted service that is an attractive alternative to other modes of transport. This is central to achieving an industry that is commercially sustainable.

4.7 ORR's aim across all of its activities is to enable the industry to respond flexibly to its consumers' needs, and thereby promote the interest of consumers. During CP5 ORR will create a new mechanism that gives passenger interests a stronger voice in specifying the investments that get made. Wherever possible we want the rail industry to take the lead, with ORR working in partnership to address barriers to commercial decision-making, and encouraging the sharing and adoption of best practice. ORR also addresses significant or systematic anti-competitive practices that harm the interests of consumers using rail services. ORR's work to increase transparency of information about the industry's financial and operational performance also strengthens the voice of consumers, and businesses across the rail supply chain, to engage openly with each other and hold counterparties to account.

4.8 As noted in the Introduction, rail services are different from many other regulated sectors for a number of reasons, not least because of franchise contracts with government. These contracts, alongside other industry codes and practices, establish a sound basis for consumer protection by obliging operators to meet clear standards of performance. For instance the government regulates key fares that that might otherwise be exploited by franchisees with market power. However the specifications can also restrict firms' ability and incentives to innovate or invest and sometimes entrench practices that make decisions for consumers more difficult, costly or risky. For example, Passenger Focus highlights the complex profusion of ticket types that train operators have to offer, and the difficulty that some passengers have in getting the cheapest ticket.

Figure 17: Customer satisfaction with rail services in the UK



Source: Passenger Focus

4.9 Where consumers do experience a poor deal, the root cause may lie in the complex network of existing duties, rules and protections that govern how rail services are supplied. These rules can also make it frustrating and bureaucratic for customers seeking redress. In these cases consumer law enforcement action is not necessarily optimal to promote the interests of consumers. Instead, better solutions may be found from working in partnership with industry and government to identify and address the root causes of poor outcomes.

4.10 Many organisations apart from ORR have a central interest in consumer outcomes, and ORR works with all stakeholders to promote consumer interests. The complex regulatory environment, discussed further in Section 5, has raised concerns about ‘double jeopardy’ and regulatory risk for consumer facing rail businesses. Some of these risks have been addressed. For example, double jeopardy that arises from dual or joint enforcement, such as general consumer law and franchise contract, is dealt with through existing guidelines and procedures ORR has in place in co-operation with government to specifically avoid such issues. Broader regulatory risks, for example from requiring changes in business practice, can be mitigated to some extent by engaging in effective dialogue and enabling industry to lead solutions.

4.11 ORR’s overall approach is to reduce complexity and remove regulatory barriers that might inhibit businesses throughout the rail supply chain from responding to the demands of their consumers, whilst ensuring that good minimum standards of consumer protection are maintained. This means aligning consumers’ interests with suppliers up and down the sector. This can be

achieved by promoting competition where appropriate, for example in markets for information and retailing services and the ability of consumers to make good, well-informed choices and to effectively challenge poor service. Wherever possible, ORR will work with rail businesses to find non-regulatory solutions to protect consumers' interests.

Greater transparency & accountability

4.12 A core principle of ORR's regulatory approach is that the industry is most effectively held accountable by empowered and informed customers, including public authorities that provide funding, so that regulation acts where possible more as a safeguard than a driver of behaviour. ORR is working to improve transparency right across the industry about the reliability and performance of rail services, and making clear where the industry's costs lie, where its revenues flow and where subsidy is received.

4.13 The ready availability of high quality, trusted information about railway performance, costs and funding is necessary so that customers and taxpayers understand how their fares or taxes are used. Industry data should be made more widely available to third parties. This may result among other things in greater variety of consumer electronic applications that improve the customer experience of using the railways, including better use of live information about services and possible disruption.

4.14 Transparency will also improve accountability and help ensure that markets work well to deliver what customers want. Customers should be aware of the choices they can make and have information to make the choice that suits them best. These choices will reveal valuable information on how customers and suppliers make decisions and what matters to them.

4.15 ORR already holds Network Rail to account for its performance on a variety of metrics that matter to the public, train operators and the supply chain. Over the course of CP5 ORR aims to develop better information on whole industry costs, revenues and where public funding goes; including by geography and route, and across the value-chain to include rolling-stock. ORR is also in the process of developing a better disaggregation of operating costs across the network, reflecting improved understanding of what affects these costs, and what therefore can be done to improve efficiency. ORR's presumption is that where this data is of sufficient quality it will be freely published for the benefit of the industry and the public.

Empowering train and freight operators

4.16 The next round of substantial efficiency savings from the railway can only be realised if we take a whole-sector approach, aligning incentives for Network Rail and the service operators to work together.

4.17 Rail customers would be better served if TOCs and FOCs were able to have a more normal customer/client relationship with Network Rail, where the majority of Network Rail's costs are met from income generated by selling their services to the operating companies. This could allow remaining public funding to be more transparent and targeted in return for providing specific services which would otherwise be uneconomic to run.

4.18 The previous section discussed that we expect to see further evolution in industry structure, including deeper alliances between Network Rail and TOCs in some areas, including Scotland, the potential for more network concessions, the development of alliancing between Network Rail and its supply chain and more bespoke arrangements in track access contracts.

4.19 For this to happen successfully it is essential that the environment in which TOCs operate becomes much more flexible and based on a more conventional commercial relationship between operators and Network Rail. Their incentives to drive efficient and cheaper use of the infrastructure should be more strongly aligned with Network Rail's. Network Rail should likewise become more responsive to the commercial needs of operators and through them their final customers, both passengers and freight. This means:

- giving FOCs, TOCs and passengers a stronger ability to identify improvements and enhancements to the Network and the way it is used;
- more effective annual Joint Performance Improvement Plans (JPIPs) to empower the ability of TOCs to drive better network performance with Network Rail, backed by regulation; and
- looking again at the way government funding flows through the industry, as described further in the next section.

4.20 TOCs should also be able to retain a share of the benefits of efficiency savings achieved by Network Rail. ORR also considers that TOCs should expect to bear more of the true cost of their use of the infrastructure rather than this being channelled through the Network Grant in a way that currently makes the true costs imposed on train operators opaque. As discussed in the previous section, the experience to date is that where operating companies are exposed to the true costs, then they work very effectively to reduce those costs while maintaining performance.

4.21 Growth in rail travel, and passenger revenues, could allow government subsidy to become more focussed on services that the market will not provide but that society values. This would allow government to step back from detailed specification of some services. It would allow TOCs to take a much more flexible role to determine and deliver what passengers want and to take a greater role in driving efficiency.

Open access and on-rail competition

4.22 ORR has a duty to promote competition across the rail sector, including on-rail competition between service providers, and taking account of ORR's other statutory duties. On-rail competition is the process by which train operators compete to run services for passengers on similar routes. This form of competition has shown that it can deliver real benefits for customers, such as more seats and reduced fares and new journey choices. Recent experience has been that where Open-Access Operators (OAOs), such as Grand Central and Hull Trains, compete with franchised operators in certain parts of the country, overall passenger numbers and satisfaction go up. However, currently only 1% of passenger services on Britain's railways are run by OAOs.

4.23 Franchising of rail services is a matter for government, who specify the structure and scope of franchises contracts. The structure of franchises let by the government therefore affects the volume of network capacity that is potentially left available to other operators who wish to run services. If government were to let more flexible, less tightly specified franchises which allow franchisees a greater degree of choice about the services they provide, this could free up capacity on some routes and afford more opportunity for OAOs to enter the market. However this would have revenue consequences for the governments as the returns received from the letting of franchises is reduced, and government needs to consider taxpayer interests. ORR works within the structure of franchises set by government to ensure that Open Access operators get a fair deal, and that competition is promoted wherever possible.

4.24 ORR is currently consulting all stakeholders about on-rail competition and the future of Open Access as part of PR13. While there is currently limited space on Britain's railways to run competing services, ORR's view is that the existing processes for OAOs to run passenger services could be improved to create more opportunities. The consultation outlines options for enhancing on-rail competition on Britain's railways so that more passengers can enjoy the benefits of competition without excessive cost to taxpayers. ORR recommends an extended opportunity to support greater on-rail competition, with scope for OAOs to run new services where they previously could not, if they pay a greater share of infrastructure costs more in line with charges paid by franchised operators. Developments in European regulations, described below, may also increase the potential for on-rail competition in the future.

Strengthening the franchising model

4.25 The government remains committed to the franchising of the very great majority of passenger rail services, and has announced plans for the next round of franchises. The franchising of passenger rail services has delivered considerable advantages to passengers, and has coincided with rising passenger numbers and satisfaction. There has been strong competition between operators to win the right to run franchises, with several new entrants to the market in recent years.

4.26 The future of train franchising is critically important to the performance and efficiency of the railway as a whole. The granting of future franchises creates an opportunity to drive significant efficiencies across the whole railway sector, but this depends on franchises being structured and let in a way that allows and incentivises them to work for greater efficiency in partnership with Network Rail.

4.27 The incentives that TOCs currently have to work together with Network Rail to achieve efficiency savings are weak. The current £4bn Network Grant received by Network Rail from government covers a large part of the costs of the infrastructure that TOCs use, and so TOCs are currently insulated from the true costs of using the network.

4.28 This means that TOCs are not strongly aligned with Network Rail to find efficiencies and manage down the costs that they currently impose on the network. The previous section discussed how the industry could be put a more commercial footing through a move towards more cost reflective charging, and exposing franchised train operators to more of Network Rail's costs through its charges.

4.29 ORR has argued, in light of the Brown Review of franchising, to make franchise agreements more flexible to allow franchised passenger TOCs to share the financial benefit from working with Network Rail to deliver innovation and efficiency throughout the life of the franchise agreement. And also to include a transparent change mechanism to deal with specification changes throughout their life.

4.30 To achieve this requires changes in the new TOC franchise agreements. If TOCs are to work with Network Rail to achieve the efficiencies which will reduce the size of the subsidy to Network Rail, this would require:

- franchise specifications that are sufficiently flexible, to allow and encourage TOCs to make innovations that result in efficiency savings during the lifetime of a franchise, not only when the franchise is let. This is particularly important if franchises are to be longer.

-
- a franchise change mechanism to allow for changes to franchises to deal with beneficial changes to specifications during the franchise term. This should be transparent and predictable. There may be a role for independent regulation.
 - TOCs to retain the benefits of savings achieved through route-level efficiency benefit sharing (RBES) and alliance arrangements in CP5. This will encourage Network Rail and TOCs to work together to identify further savings by allowing TOCs to keep some of these savings. ORR believes that collaboration at the route level is likely to achieve such savings. The current franchises do not allow such benefit sharing.
 - TOCs to have an interest in the cost of the infrastructure that they use so that they are incentivised to help improve its efficiency. This means they should not be held neutral to changes in the access charges they pay as they are under the current franchises, nor when these change at the time of a price review. TOCs should increasingly expect to meet the true costs of the infrastructure that they use, rather than funding in respect of those costs being channelled directly from government to Network Rail. Any move towards more cost reflective charges for TOCs would need to be implemented in stages so as not to create additional risk for taxpayers through reduction in franchise premiums, and to avoid grievous commercial shocks to operating companies.

Supporting a growing freight industry

4.31 The rail freight sector is a valuable and growing user of the rail network. The Government has said that it wants to encourage a competitive and successful freight sector, recognising the environment advantages of freight transport by rail. The railway is particularly good at transporting large bulky commodities, like coal and building materials, as well as container traffic from our ports. It also keeps large numbers of heavy goods vehicles off the road network, reducing congestion and pollution.

4.32 Since 1994 overall freight traffic has grown by 60%, including an 80% increase in container traffic over the last ten years, and it is forecast to continue to grow in the future. ORR expects growth in demand from freight to exceed growth in passenger numbers over the next five years, totalling 22%.

4.33 Although small compared to passenger services, the freight industry is a relatively competitive and commercial sector, privately owned and operated, with no underlying franchise contract. Freight operators have made around £1.5 billion of investment since privatisation and productivity growth has been strong. ORR recognises that the freight industry requires a stable and predictable environment in which to continue to make these long-term investments.

4.34 Britain's railways are a mixed-use network and this means that on some core routes such as the West Coast Main Line there is increasing demand for both freight and passenger services, and available capacity is limited.

4.35 In CP5 the ORR will introduce a new charge called the "freight specific charge" which means that certain commodities contribute to the avoidable cost of freight, to be phased in over a period of time. In the approach to CP6, ORR, Network Rail and freight operators will work together to review the costs caused by freight and the structure of access charges, as discussed in the previous section, bearing in mind the commercial and competitive environment that the freight industry is in.

4.36 Charging alone is not sufficient to encourage efficient use of the network. In preparation for CP6 and beyond, the whole of the industry will work together to address these growing demands to find optimum solutions to accommodate growth, bearing in mind that passenger and freight traffic have different requirements from network infrastructure. This is why government has ring-fenced £230m for freight-specific investment in the network infrastructure in CP5. It is important that these funds are deployed productively, and that the investments made effectively address the long-term challenges created by growing competition for access to the network from passenger and freight services.

4.37 ORR will work more closely with the freight industry in CP5 to develop a long-term strategy for freight in approach to CP6, including through the whole-industry Rail Delivery Group that brings together the freight operators with Network Rail, ATOC and passenger operators.

Opening up European rail markets

4.38 Rail is at the heart of the EU's transport policy, and European influence is becoming ever more important for the future of Britain's railways. The Channel Tunnel is Britain's strategic link to the European rail network and through our involvement in the tunnel's separate regulatory regime, ORR is working with all stakeholders in Britain and France to drive increased use of capacity in the tunnel, improve competition for services and maximise transparency of access charges.

4.39 The EU's aim is to create a single European railway area by removing unnecessary technical and administrative barriers. Britain supports this vision and ORR and the government have been effective at influencing the Commission's approach. In particular, the recast of the EU's 'First Railway Package' of regulatory measures has reinforced the authority and independence of regulatory bodies and has introduced rules to stimulate investment, increase transparency and improve access conditions.

4.40 The Commission's vision for the future suggests a radical transformation of EU rail networks in coming years, with implications for UK railways, including:

- **Interoperability:** The Commission envisages a network of interoperable, multi-modal routes for passenger and freight transport ('Trans-European Transport Networks'). Completion of the 'core' network is scheduled for 2030, and would include a link to the UK through the Channel Tunnel. This will carry implications for ORR's approach to CP6 and CP7, with clarity required on what elements of the package should be funded by government. TEN-T is also likely to affect ORR's work on interoperability, engineering and enhancements.
- **Greater competition:** The upcoming 'Fourth Railway Package' introduces the last stage of market opening for European rail with the proposed liberalisation of domestic passenger services from 2019. The Commission's current proposal requires operating franchises to be competitively tendered, and that they should not restrict profitable open-access. These proposals are currently under negotiation, and there is a lack of certainty detailed outcomes and timescales. Nevertheless, the UK stands at the forefront of liberalisation in Europe, and has a competitive franchise market, making it well-placed to benefit from liberalisation in other countries.
- **Infrastructure separation:** The Commission's vision includes functional and institutional separation between infrastructure management and service operation, to create a level playing-field for access and competition with no conflict of interest. Britain is already broadly compatible with this vision and the proposals will therefore be assessed with regard to the potential for innovation and industry reform in Britain, and to avoid the risk that the scope for alliancing, benefit-sharing schemes, and other co-operation mechanisms for the alignment of incentives, could be impeded.
- **European freight network:** The Commission is developing a network of freight corridors with pre-defined freight capacity. From November 2015 the UK will join Corridor 2 (between the Netherlands and Switzerland), with a branch from Belgium, through northern France and the Channel Tunnel, to London. This aligns with ORR's desire to see more competition within the freight market and a more uniform approach to access regulation in Europe. ORR will assist in the development and implementation of capacity-allocation and access regimes to promote simple and clear rules for the benefit of freight users and customers.
- **Technical and safety standardisation:** The pressure for a single European system will increase, with the Commission reducing the opportunity for derogation from European approaches, standards and rules. This may bring cost benefits through supply chain economies of scale and reduce administrative burdens, as well as facilitating the introduction

of international rail services. Interoperable rolling stock will present opportunities for RoSCOs to expand their customer pool in other member states. ORR will work to ensure that European approaches are proportionate, bring genuine benefit to customers and funders without imposing undue costs, and avoid the creation of supplier cartels while allowing the UK's best practice approach to safety management to be maintained.

4.41 The Commission's long-term objectives are therefore clear, but a lot of the detail remains subject to revision, amendment and compromise. ORR is well-respected by European institutions, industry bodies and member states, and is strongly positioned to influence the development of these proposals.

4.42 Some EU stakeholders have called for a European-level economic regulatory body. ORR believes that gradual harmonisation and collaboration between national regulatory bodies will be a more effective approach to the resolution of cross-border regulatory issues. Regulatory bodies elsewhere in the EU are gaining in authority and experience. As a member of IRG-Rail ORR continues to collaborate with other national regulatory bodies to develop best practice, and harmonise our approaches to practical regulatory matters where this makes sense.

Next steps

- ORR will support the strategic cross-industry dialogue led by the Rail Delivery Group (RDG), and will support the work of RDG, ATOC, operating companies and Network Rail to deliver efficiency and performance improvements with less need for regulatory action wherever possible.
- Transparency of information about service outputs, costs, and where public funding actually goes will continue to improve throughout CP5 and CP6 as ORR develops and publishes detailed high-quality data that supports stronger accountability and better decision-making across the industry.
- During CP5, ORR will work together with passenger and freight operators to review developments in the incentive and charging regime to understand the extent to which it empowers operating companies and whether it is driving the intended behaviours and outcomes.
- In light of developments in franchising, ORR will work with TOCs to identify perceived areas of significant regulatory risk created by complexity in the sector, to avoid double-jeopardy between regulatory rules and contracts, and collectively work to address the challenge of TOCs managing regulatory risk over the course of franchise terms by finding non-regulatory

solutions wherever possible.

- ORR will work closely with the freight industry and RDG to develop a long-term strategy for freight ahead of CP6, recognising the particular commercial requirements of the freight sector.
- ORR will conclude its consultation on the future of Open Access and work with stakeholders across the industry to encourage greater on-rail competition that protects and promotes the interests of both passengers and taxpayers.
- In light of the European Commission's publication of the Fourth Rail Package ORR will continue to work with DfT and industry to open up EU markets, and ensure that EU regulation develops in a way that is beneficial to UK interests.

5. Developments in rail regulation

Summary

- Independent economic regulation has a strong track record in the UK of supporting efficient sustainable investment in essential public infrastructure, and there is scope for independent regulation to have a broader role in rail.
- Rail is subject to a relatively complex regulatory environment compared to other regulated sectors, with different parts of the sector regulated in very different ways.
- The rail sector is undergoing a period of rapid change, and the regulatory environment will need to adapt in response.
- As the industry changes, so too a different type of regulation could be envisaged, which gives more flexibility and freedom to rail businesses.
- Regulation will continue to take a principled, proportionate, risk-based and efficient approach. If commercial relationships and the market are working well the role of regulation could be significantly reduced.

5.1 This Long Term Regulatory Statement has outlined ORR's view that strengthening the commercial sustainability of the rail sector is the most effective way to secure its future and for it to make the greatest contribution to the economy and society as a whole.

5.2 The current structure of rail regulation has delivered significant improvements in costs, performance and safety over the last decade. However a significant efficiency challenge still remains and ORR believes that to meet this challenge beyond the end of CP5 requires much more than the continuation of the current regulatory regime.

5.3 The next phase of benefits requires a significantly greater alignment of incentives between all parts of the industry supply-chain, with changes to the shape and structure of relationships across the sector. This document has described what some of these changes might be, and the implications for the changing structure of Britain's railways.

5.4 The opportunity is that, as efficiency and financial sustainability improves, the industry could become less dependent on generalised subsidy. This would allow the governments in London and

Edinburgh to target the public funds that they choose to invest towards specific services and objectives.

5.5 As the majority of the industry becomes less reliant on public support, then the regulator can take a different approach too. If the industry can operate increasingly on the basis of transparent and commercial arrangements, with effective aligned incentives that deliver benefits for customers, then regulation will change to reflect the different structure of the sector.

5.6 Government will always want assurance from the regulator that it is getting value for money, that markets are competitive and fair, and that customers are getting a good deal. But the potential is that, if commercial relationships and the market are working well, the overall burden created by regulation and government intervention could be reduced.

The complex regulatory environment

5.7 This document has described the complexity of the rail industry's structure and organisation, and this complexity is also reflected, to an extent, in the regulatory environment, which differs greatly through the rail value chain. While ORR has whole-sector responsibility for competition health and safety, there is a diversity of approaches to specific economic regulation and contractual management for different parties.

5.8 In general terms, the weight of regulatory and government intervention tends to reflect the proportionate degree of public support and monopoly power that the different parts of the industry enjoy. This has led to a diversity of regulatory approaches across the industry, reflecting the different market structures in different parts of the value chain. In particular two of the largest parts of the industry, with the closest interfaces, are regulated in different ways. Franchised train operating companies are regulated by contract with the Department for Transport or Transport Scotland, and Network Rail by licence from ORR.

Figure 18: The regulatory environment in rail

Approach to regulation	
Supply chain	No ex ante regulation although have to comply with safety regulations.
Network Rail	Economic regulation on the basis of a licence
HS1	Economic regulation on the basis of a concession agreement and statute
ROSCOs	Small amount of pro-market regulation via the code of practice put in place following CC reference
Freight operators	No ex ante regulation
Franchised passenger train operators	Regulation by contract (franchise agreement)

5.9 This means that rail not only has real operational interfaces to deal with, but there is also the additional complexity of an interface between two fundamentally different modes of regulation. This is a real issue where decisions need to be coordinated, such as on infrastructure capacity and train capacity, which require interdependent decisions on and investments in infrastructure and rolling stock.

5.10 Government has said that it considers that there are benefits to be gained from moving towards a more unified regulatory structure in rail. Following a joint consultation with ORR on this subject, and conclusions published in March 2013¹, ORR has taken on new responsibilities for train operators' maintenance of, and compliance with, passenger complaints handling procedures and disabled peoples' protection policies. The conclusions also include a commitment to improved joint working between the Department for Transport and ORR on how the operational performance of the whole rail industry is monitored and reported. The ORR is also taking on a greater role in respect of monitoring and reporting whole industry efficiency and value for money. Both these commitments will improve the comparability of information provided to passengers and the informed commentary available to explain it. The UK Government has said that it will keep under review the option of transferring additional functions to ORR in the future, as it has recently done

¹ <http://www.rail-reg.gov.uk/upload/pdf/dft-orr-statement-180313.pdf>

with responsibility for the quality of passenger information during disruption and several other responsibilities.

A principled approach to regulation

5.11 This discussion paper has described some of the significant forces that will continue to drive change across the sector in the coming years. Existing developments are already laying the foundations for fundamental changes to the way that rail infrastructure is procured, maintained, renewed and operated across the UK. Section 1 described the trends already underway that will affect what the sector may look like in 20 years' time, and how it will differ from today.

5.12 In this dynamic environment, the regulatory regime will need to adapt to reflect developments in the sector. However ORR's approach to regulation develops in the future, in response to changes in the industry, it will continue to hold certain principles and approaches common to the way that we regulate, it will always enforce the law, and it will protect consumer interests.

i. Empowering the industry

5.13 As the rail industry evolves, ORR will work with the grain of the industry's changing commercial incentives. We will strengthen those incentives, improve their effectiveness and align them with the interests of customers and taxpayers.

5.14 As described in Section 2, ORR expects there to be continued innovation in different operational models for maintaining, renewing and operating rail infrastructure. These may build on recent experience including the Wessex Alliance between Network Rail and SouthWest Trains, and the concession to operate HS1.

5.15 The development of these new models may alter the focus on ORR's approach. Wherever possible it will encourage industry leadership and industry-led solutions over regulatory intervention. This will include working closely with the Rail Delivery Group (a recently established group of senior industry leaders) as well as wider stakeholders as appropriate. ORR will help to inform, facilitate and support the delivery of industry-led solutions wherever they will deliver value for customers and taxpayers, ensuring that regulation is used only where there is no reasonable alternative.

ii. Focus on outcomes and outputs

5.16 ORR will remain an outcome-focused regulator; although the particular outcomes and outputs that ORR focuses on may change as the industry changes. For example, the devolution within Network Rail of responsibility for maintaining and upgrading infrastructure, away from the centre

and down to the route level, alters the sort of outputs that the company itself is targeting and monitoring.

5.17 It raises the possibility that regulation could move towards focusing on comparative outputs for individual operating units, rather than for the company as a whole. This comparative approach would be much closer to the model of regulation used successfully in the water sector, where the poorest performing companies are regulated by reference to bench-marks set by the highest performers. ORR remains open minded about the merits of developing separate, RABs or licences for individual routes in addition to the current route-level accounts, although this may have the potential to strengthen the regulatory focus on outputs rather than inputs. Partly this is because it would allow regulation to be set appropriately for individual areas, rather than a one-size-fits all approach to setting top-level outputs. ORR is also mindful of the development of ‘menu regulation’ in other sectors, and will keep this under review in light of devolution within Network Rail to diverse regional operating units.

5.18 Irrespective of the model of regulation, ORR will strengthen its focus on outcomes and outputs. Interventions will be based on a clear idea of how they are expected to improve the experience of rail customers or taxpayers. ORR will always focus intervention on those areas where it can best add value for customers and taxpayers.

iii. Engaging, empowering and protecting consumers

5.19 The effect of many of the changes that will shape the rail sector will be to make the industry more consumer focused. The creation of new models of infrastructure delivery, devolution within network rail, localism and the role of the devolved governments should all combine to shorten the distance between decision-makers and customers. This should make the industry more reactive to delivering what customers value most, and strengthen incentives and improving efficiency and performance.

5.20 ORR aims to create a regulatory and policy environment which reflects the industry’s focus on customers, and empower rail businesses to deliver what their customers want. ORR will continue to work with stakeholders including Passenger Focus to support the development of an industry in which the customer experience is comparable with the best consumer experience in any sector, where passengers feel well-informed when making choices about whether, when and how to use the railway. ORR will always act in the interests of rail customers, highlighting issues of concern to passengers and, where appropriate, ORR will use its powers under consumer law to ensure passengers are treated fairly.

iv. Transparency & accountability

5.21 The current trend for much more open and clearly presented information to passengers and the public about the real costs and performance of the rail network will continue so that customers, funders and decision-makers at all levels can make informed choices about the services that they want to use and to pay for.

5.22 ORR considers a core principle of its regulatory approach to be that industry is most effectively held accountable to empowered and informed customers, as well as funders, so that regulation acts more as a safeguard than a driver of behaviour. ORR is working with the Governments to improve transparency right across the industry about the reliability and performance of rail services, and making clear where the industry's costs lie, where its revenues flow and where subsidy is received.

v. A proportionate, risk based approach

5.23 Building on our approach to date, in our economic, consumer, competition and safety regulation ORR will take a forward-looking risk based approach. We recognise that a small intervention at the right time could help to avoid problems for customers or more intrusive interventions later, and will emphasise working with the industry to find non-regulatory solutions that negate the need for enforcement. This will require us to maintain and develop our understanding of risks across the industry, and in particular the risks to delivery of customer and taxpayer value.

5.24 A risk-based approach will also require us to maintain a strong focus on Network Rail, as the monopoly provider of infrastructure services to the rail industry. ORR will continue to challenge the company hard to deliver efficiently for customers and funders, while encouraging it to improve its capabilities and allowing it more flexibility where it has demonstrated them.

5.25 Above all, ORR will encourage the industry to understand risks and manage them effectively. This focus on the industry's capacity for risk management is proving to be particularly successful in health and safety regulation. And we will expect them to provide us with good quality, timely assurance. If we are assured we will leave the industry to manage those risks without our intervention. But if not, we will require additional information and action from the industry, and we will not hesitate to take a more interventionist approach if necessary to protect customer and taxpayer interests.

© Crown copyright 2013

You may reuse this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit

www.nationalarchives.gov.uk/doc/open-government-licence/version/2/
or email: psi@nationalarchives.gsi.gov.uk

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

OGL